

Canadian Medical Residency Guide

Taking control of your future medical career and financial life



Sponsored by



Editors ▶ Dante Morra ▶ Cory Torgerson ▶ Andrew Loblaw
Project Coordinator ▶ Sarah Blissett

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medical career and financial life

Editors: Morra, Torgerson, Loblaw

9th Edition
Medical Career Services

<http://www.medicalcareer.ca>

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Produced and distributed by RBC® and Medical Career Services

Editors: Dante Morra, Cory Torgerson, Andrew Loblaw
RBC Royal Bank®

<http://www.medicalcareer.ca>

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Canadian Medical Residency Guide

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Project Coordinators: Sarah Blissett, Pierre Robichaud,
Samantha Duncan, RBC Royal Bank

Page composition by PageWave Graphics Inc./
Marilyn Loveless and Joseph Gisni

French Translation by Versacom

7th Edition, © 2009

Canadian Medical Residency Guide

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Project Coordinators: Sarah Blissett,
Samantha Duncan, RBC Royal Bank

French Translation by Versacom

6th Edition, © 2008

Canadian Medical Residency Guide

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Project Coordinators: Sarah Blissett and
Christine Law; Samantha Duncan, RBC Royal Bank

Page composition by PageWave Graphics Inc. /
Marilyn Loveless and Joseph Gisini

French Translation by BBDO and Ariad Custom Communications

5th Edition, © 2007

Canadian Medical Residency Guide

Taking control of your future medical career
and financial life

Project Coordinators: Bheeshma Ravi; Diane Evans, RBC

4th Edition, © 2006

Canadian Medical Residency Guide

Taking control of your future medical career
and financial life

Project Coordinators: Bheeshma Ravi;
Julija Ezergailis, RBC

3rd Edition, © 2005

Canadian Medical Residency Guide

Taking control of your future medical career
Project Coordinator: Ravi M. Mohan

2nd Edition, © 2000

Project Coordinator: Cory Torgerson

Editors: Kathy Barnard-Thompson, Philip Dopp,
Tyler Rouse, Cory Torgerson

1st Edition

Editor: Dante Morra

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Canadian Cataloguing in Publication Data

Main entry under title

Canadian Medical Residency Guide—9th Edition

9th ed.

ISBN 0-7727-8732-8

1. Medicine – Specialties and specialists. 2. Medicine – Vocational Guidance. I. Loblaw, Andrew; Morra, Dante; Torgerson, Cory II. University of Toronto. Medical Career Services.

R729.5.S6T34 2000 610.69 C00-932750-9

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LIST OF CONTRIBUTORS

Chapter/Section Editors

Diana Alli
University of Toronto

Sarah Blissett
University of Toronto

Mayur Brahmania
University of Saskatchewan

Christopher Chin
University of Western Ontario

Jonathan DellaVedova
Northern Ontario School of Medicine

Sagar Desai
University of Toronto

Michael W. Deutschmann
University of Calgary

Vinay Fernandes
University of Toronto

Aaron Grant
Memorial University

Patrick Gudgeon
University of Toronto

Nicole Hawkins
Queen's University

Mary Jamieson
Dalhousie University

Carly Kirshen
McMaster University

Kevin Koo
University of Toronto

Christine Law
University of Toronto

Martha LeBlanc
University of Toronto

Andrew Loblaw
University of Toronto

Dante Morra
University of Toronto

Navya Mysore
McGill University

Nawaaz Nathoo
University of Alberta

Amy Ng
University of Toronto

RBC Royal Bank

Pierre Robichaud
University of Toronto

Mouhanned Sadek
University of Toronto

Ève-Magali Sauriol-La Palme
University of Montreal

Cory Torgerson
University of Toronto

Michael Tso
University of British Columbia

Andrew Vellathottam
University of Western Ontario

Jason Yu
University of Western Ontario

Yangmin Zeng
University of Ottawa

PREFACE

The **Canadian Medical Residency Guide: Taking control of your future medical career and financial life – 9th edition** was designed as a practical guide to successfully direct medical students to the residency program of their choice. This book provides the most objective and current information available that addresses students' uncertainty about which specialty to pursue, obtaining a position in a competitive specialty, and matching to a preferred location.

With the launch of the first edition, this book became a valuable resource for University of Toronto medical students throughout their training. The second edition built on the strengths of its predecessor and made some critical advances. Most important, it provided new information about every residency program across the nation, including the CaRMS Program Directors' Survey. More recent editions have expanded to address the specialties as a whole to include lifestyle profiles and how to balance family, medicine, and a variety of interests. The guide is now distributed to medical students all across Canada and is available in both English and French. Also, in efforts to be environmentally friendly, the guide was only distributed in a USB manner.

The sixth edition took the handbook to the next level. Specifically, more case studies that represent typical career and lifestyle choices that many medical students face were added to the guide. Hopefully these examples help medical students address the questions that perplex them during their medical student career. In addition, the residency program profile responses and contact information was updated to provide more comprehensive surveys. Additional specialty career profiles were added, all in an extremely user-friendly format.

The eighth and ninth edition include salaries for each specialty. Program director contact information was removed because it is often changed following publication of the guide. Students can find the most recent information on the CaRMS website (www.carms.ca).

Our aim is to help you maximize your efforts toward getting into the specialty program of your choice by helping you select programs that meet your personal needs, get interviews at these programs, and shine during your interviews.

The most important thing to realize is that successfully taking control of your future medical career means a concerted effort on your part to explore your options, prepare yourself with the most up-to-date information, and take the necessary steps to get what you desire. The earlier you start, the better prepared you will be. We hope that the data in this book will give you information that will help you to achieve your career goals.

ACKNOWLEDGEMENTS

This book is dedicated to the outstanding group of medical students from the University of Toronto and every university across the country who contributed to this resource, creating the most balanced and comprehensive resource possible. Their suggestions, ideas and input have shaped the guide into what it is today.

Thank you to the Program Directors, faculty reviewers and physicians from around the country for all their guidance, input, time and support.

RBC Royal Bank also played an invaluable role in creating this book, and would like to thank everyone involved for their assistance.

Finally, we would like to express my gratitude to Dr. Dante Morra, Dr. Andrew Loblaw and Dr. Cory Torgerson for having the insight to create this resource.

Sarah Blissett, MD

Pierre Robichaud, MD Candidate 2013

FROM THE EDITORS AT MEDICAL CAREER SERVICES (MCS)

Studies have shown that residency selection is the most stressful aspect of medical training. Our goal is to provide high-quality information and services to help address this stressful process.

Medical students and physicians are often not equipped with the tools and the necessary information to make informed and functional decisions about their future. We hope this book provides part of the puzzle in helping you achieve a successful and happy career.

This book expands on the fifth edition and provides valuable case studies to consolidate career information and financial advice. The *Canadian Medical Residency Guide: Taking control of your future medical career and financial life* assists you to not only select the right specialty but to also take control of your financial well-being. We would like to thank RBC Royal Bank for its sponsorship and for providing expert content on financial management. RBC Royal Bank is providing national leadership in trying to meet the special needs of health care professionals.

A great deal of effort has been taken to try and ensure that the information supplied is as current as possible. The book has been reviewed by several national stakeholders. Primarily we would like to thank the Vice President of External Affairs at each medical school and the CFMS for providing feedback on the book's content and for helping in the national distribution. We would like to thank Sandra Banner and CaRMS for providing permission to reproduce several tables and graphs.

This book would not be possible without the tremendous leadership of Sarah Blissett. She worked with the contributors to put together a fantastic resource for students across the country.

Sincerely,

Dante Morra, MD, FRCP(C), MBA

Cory Torgerson, MD, PhD, FRCP(C)

Andrew Loblaw, BSc, MD, MSc, FRCP(C), CIP

Section A

INTRODUCTION

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This chapter identifies the underlying reasons why we have created this medical student resource, and explores key concepts in the residency decision-making process.



A-1

PURPOSE OF THIS BOOK

Acceptance to medical school represents the beginning of a journey toward lifelong service to the community. Along this journey there will be many choices to be made, but none will be as important as the one pertaining to what type of doctor you wish to be. In making this life-altering decision, there are a multitude of factors that require consideration, including job security, satisfaction, and quality of life. These are not trivial issues and require considerable time to fully evaluate; however, it may seem like there is never enough time. From as early as the end of first year, students begin to feel the brewing pressure of the decision that looms regarding what residency to choose. In this book, we try to relieve this pressure by providing students with an adjunct resource to their own experiences to help them make the most informed residency selection decision.

The 2011/2012 Canadian Medical Residency Guide has been compiled by medical students from all medical schools across Canada and in conjunction with the Office of Student Affairs at the University of Toronto. We have done our best to create continuity throughout the book and hope it will be a useful guide and resource for your questions. Each chapter addresses an issue we identified as important for residency selection. Also, Case Studies have been added to this edition to showcase and address common questions regarding lifestyle, financial issues, and specialty-specific concerns that medical students may face.

This book highlights the areas that medical students, residents, and Program Directors feel are important in choosing and securing a specialty. Furthermore, it helps guide you through all aspects of your application. An outline of a suggested way to use this book through your three or four years of medical school can be found in the next section.

A-2

HOW TO USE THIS BOOK

We have tried to arrange the book in a logical order to best assist you as you navigate your way through the decision-making process. It highlights the areas that medical students, residents, and Program Directors feel are most important in choosing and securing a specialty. Furthermore, it helps guide you through

all aspects of your application. Read it straight through for a comprehensive review of the process, then keep it handy to use as a reference guide as you go through your three or four years of medical school. This guide is an important part of the information-gathering process and can serve as the basis of your action plan.

The Decision-Making Process

The decision:

- What residency program(s) do I want to apply to?
- What should I consider in this decision?
- How should I go about making this decision?

Key Factors in Making Your Decision
The Decision Algorithm



Making the decision:

- What are the program features?
- What about lifestyle?
- Where do I want to do my residency?
- What are the Program Directors looking for?



Residency Program Profile Section
Career Profile Section
Location Profile Section
Program Director Survey Section



Securing the residency position:

- What is CaRMS?
- How do I strengthen my application?
- How do I maximize my performance at the interview?

The Application Process Section
The Application Process Section
The Application Process Section

Do you wonder what it would be like to have a baby in residency? Or if specialty training allows you to pay off your debts faster than if you pursued Family Medicine? Or do you wonder what a student should do to make himself or herself a competitive applicant for a competitive residency program?

These questions regarding lifestyle, financial, and specialty-specific concerns are examples of the issues showcased and addressed in the nine cases studies added to this edition.

Residents, physicians, and career counselors were consulted to compile answers pertaining to career decisions. A financial planner and lawyer compiled the financial and legal responses. Brief answers to the questions posed in the cases are highlighted or summarized throughout the text of the guide. For ease in finding the answers, the location of the answer within the book is written beside each question. For completeness, fully explained answers to the questions posed by the cases are found at the back of the guide in Section I.

Case Studies

Case 1 – Having a baby during residency

Lindsey and Rob are fourth year medical students who plan to get married before starting residency. Their concerns with applying to residency mainly pertain to their desire to attend programs in the same location. Being 26 years old, both are thinking about children too. They've both been to information sessions with residents who have children and heard their classmates talking about having children during residency. Lindsey and Rob both have some questions.

- › Are there any strategies for a couple to match to residency programs offered at the same location? Answer: Section H-6.
- › How will she manage to do call in her first and third trimesters? Answer: Section G-2.
- › How much time can she take off work if she has a baby? Can Rob take paternity time when their child is born? Answer: Section I-1.
- › Will having a baby during residency mean that it will take her longer to finish her residency program? Answer: Section I-1.
- › What are some advantages to having a child in residency versus when she has her own practice? Answer: Section G-2.
- › What are some options to make return to work easier? Answer: Section G-2.
- › Should Lindsey factor pregnancy into the decision of what residency program she chooses? Answer: Section A-4.
- › How can Rob and Lindsey prepare financially so that they can take as much leave as possible? Answer: Section B-5.

Case 2 – Overwhelmed with debt

Ruth, a third-year medical student, sits down one night to open her mail. She opens her bank statement. She can't believe that after three years she's already accumulated \$120,000 of debt and has heard rumours of unforeseen costs in fourth year. The reality of having \$150,000 in debt sinks in. She is feeling completely overwhelmed by debt.

- › Are the rumours that Ruth has heard true? What are the unexpected costs that she may need to cover in fourth year? Answer: Section I-2.
- › What steps/plans/budgeting should she carry out now to ensure minimal addition to her debt load? Answer: Section I-2.
- › How will she afford to repay her loans during residency? Answer: Section I-2.
- › She overheard some classmates mentioning something about saving receipts for income taxes. Why would they do this? Answer: Section B-2.

Case 3 – Who has more debt? A comparison of two-year, five-year and seven-year residency programs

Tyler, a fourth year medical student, is still undecided about his future career choice. He's thinking about Family Medicine, Endocrinology specializing in Pituitary and Thyroid Disorders or General Obstetrics. He accumulated \$160,000 of debt over the course of his medical training. Coincidentally, this is the average amount of debt acquired by Canadian medical school graduates. He heard that some of his classmates were considering Family Medicine because of the shorter training time to pay off their debt more quickly.

- › What would his financial situation look like if he did a five-year residency plus a fellowship, a five-year residency or a two-year residency program? Answer: Section I-3.

Case 4 – Training beyond residency

Alex has just started his residency in Ophthalmology and is considering subspecializing in treating Glaucoma. Alex is excited about starting his residency but wonders what is required to subspecialize within a given specialty.

- › What are the steps he needs to take to specialize in Glaucoma? Answer: Section C-1.
- › Will Alex be in a different city for his fellowship? Answer: Section I-4.

Case 5 – The reality of disability insurance

Andy is a third year medical student. His wife is a third year law student who will be entering the workforce next year. They have talked about having a family but have decided to wait until they are more established in their careers. Andy has gone to many information sessions about various types of insurance he should look into, but didn't really think he needed any of it. Andy decides he'd rather not obtain any disability insurance. He's young and healthy, right? Andy does an Internal Medicine rotation and unfortunately sticks himself with a needle that he had used to inject an HIV-positive patient.

- › What should he do about the needlestick injury? Answer: Section I-5.
- › Will he be able to work if he is HIV or Hepatitis B or C positive? Answer: Section I-5.
- › Is he still eligible for disability insurance? Answer: Section B-4.
- › What happens if he is diagnosed with a serious illness during his residency or career? Is there a type of insurance that would allow him to pay off his student debt? Answer: Section B-4.
- › What if Andy dies unexpectedly after his first child is born? Is there any insurance to ensure his child and wife are looked after financially? Answer: Section I-5.

Case 6 – Tailoring lifestyle and pursuing a subspecialized Internal Medicine career

Sunny, a second year medical student, obtained a Master's degree and worked in a lab before he started medical school. One day in class he looks around at his classmates and realizes that he is a bit different than them. At 28, he's a few years older than the average student, he's married to a woman with an established career, he has a two year old daughter at home and, on top of his \$18,000 tuition, has a mortgage to pay. Sunny starts to think about his future and wonders.

- › What is the best way for him to manage the debt he will acquire? Answer: Section I-6.
- › He'd love to be a cardiologist, but wonders how new physicians arrange their workload. Is it possible for him to arrange a 50-hour workweek as a Cardiologist? Answer: Section D-1.
- › He's quite aware of how expensive school is and wants to save for his daughter's education. What should he invest in? What about for his retirement? Answer: Section I-6.
- › What residency program should he enter in to get into a Cardiology program? What is the application like? Answer: Section C-1.

Case 7 – Alternative career choices

Jaime, a fourth year student, comes home from a long day of dealing with patients and realizes he doesn't enjoy patient contact. He didn't enjoy the past year of clerkship and doesn't want to spend the rest of his life tending to patients in a hospital or clinical setting. However, he doesn't want to throw the past four years of education down the drain (not to mention the drain on his bank account) and plans to graduate. He knows vaguely that there are opportunities for MDs that don't revolve around the traditional physician role, but doesn't know what they are or where to start looking. However, he thinks there must be options available for medical students in his position.

- › What are some career options available to Jaime that make use of his medical degree but do not require him to practice medicine? Answer: Section I-7.
- › Do the alternative careers require additional training or schooling? Answer: Section I-7.
- › What is the starting salary for these careers? Answer: Section I-7.
- › Should he apply to CaRMS? Answer: Section I-7.
- › If he does not apply to residency, how will this affect his government loan and line of credit payments? If he goes for further schooling, will his government loan payment be deferred? Answer: Section I-7.

Case 8 – Starting your own practice

Sanjay is a second year medical student and isn't sure what career option he'd like to pursue, but knows he doesn't want to work in a hospital or academic setting. Opening up a private practice in his hometown is looking very attractive but he has heard that start up costs and overhead can be very steep. He plans to stay in the same location until he retires but worries that with his financial debt after medical school, he will not be able to pursue his ideal practice for many years.

- › What specialties would be feasible in a private practice setting? Answer: Section A-4.
- › Sanjay had questions about whether he'd be able to finance a practice and wondered if this career path was even worth pursuing. What are financial options available to physicians opening practices? Answer: Section B-5.
- › What are some costs associated with opening a clinic besides the obvious costs of an office space and equipment? Answer: Section I-8.
- › How would he obtain equipment or hire staff? Answer: Section I-8.

Case 9 – Pursuing a competitive residency program

Mambo and Adil are third year medical students who just finished their second clerkship rotation in Surgery. Mambo was not particularly interested in surgery before his clerkship rotation but is now keen on Plastic Surgery. He has heard that it's difficult to get into a Plastic Surgery residency program from Adil. Adil has shown interest in ENT since first year. Adil shadowed ENT surgeons regularly throughout first and second year and also pursued ENT research in both summers.

Mambo is very worried that it is too late for him to pursue Plastic Surgery especially when other students, like Adil, have demonstrated interest in competitive surgical programs through committing their summers to research and shadowing surgeons.

Mambo seeks advice from Adil about how to best pursue Plastic Surgery. During this conversation, Adil starts to wonder what would happen if he changed his mind about ENT.

Mambo and Adil both have some questions about pursuing competitive surgical residency programs.

- › Is research necessary? Does it matter if research is in that particular field? For a student like Mambo, are there any opportunities to complete research in the field during clerkship? Answer: Section A-5.
- › Is it looked down on to show interest in other specialties, e.g., doing summer research in ENT in first year like Adil, but then realizing you want to do Ophthalmology in third year? Answer: Section A-5.
- › Should all fourth year electives be in that field? If not, how many should? What's the best way to set up electives? Answer: Section A-5.
- › Should students like Adil who are interested in surgery from first year pursue surgical shadowing and research in first and second year? Answer: Section A-5.
- › Is it too late for Mambo to realistically pursue Plastic Surgery? What should he do to be a competitive applicant? Answer: Section A-5.
- › Is there anything else that someone interested in a competitive residency program should do in order to be a competitive applicant? Answer: Section A-5.

Choosing your future career is a very complex process and many factors are taken into account before a final decision is made. This book objectively examines many of these factors and hopefully it will provide you with a solid decision-making framework.

The key factors in this book can be broken into:

- › program features
- › career goals
- › location
- › additional factors (e.g., family and friends)

These factors have been succinctly examined by Dr. J. Gonzalez at the American Medical Association. A summary of his paper “Selecting Your Residency Program” is outlined below:

Program Features

Stability

Look at the stability of the program, especially the finances and outlook of the institution at which you are considering training.

Support

As an applicant, you want to know that the program will be there to support you. You can judge this by looking at the quality of fellowships attained, turnover rate in the program (how many residents leave/transfer after the first year), availability of mentors, number of residents who stay at the institution to complete fellowships, and departmental responses to resident complaints, as examples.

Flexibility

Does this exist in the program? How amenable is the program in allowing residents to change schedules to attend a conference? For residents who become pregnant during their residency, how hard is it for them to get time off?

Lindsey from Case 1 is questioning if she should factor pregnancy into a career decision. Some residents felt that non-surgical specialties are more accommodating of having children during residency. However, other residents felt that any residency program is manageable with pregnancy and this should not be factored into career planning decisions.

In particular, provincial agreements differ in terms of maternity leave, so it may be helpful to review which provinces are more supportive of pregnant residents in choosing the location of a residency program. A summary of provincial agreements can be found in section E-2.

Institutional Climate

What is the political/social/work climate at an institution? Very conservative institutions are less responsive to change. This could be manifested by very poor relations with the surrounding community or a lack of community outreach programs.

Career Goals

Academics

Decide whether you want to pursue research, work in the community or do a little bit of both. You will begin to get an idea of this toward the end of medical school as you get more experience. In this regard, remember that when applying for a competitive fellowship at a tertiary care hospital, you will likely have an advantage if your residency was completed at a tertiary location. A well-known and well-regarded program will give you a better opportunity to attain a higher-ranked fellowship.

For example, Sanjay from Case 8 has decided he'd like to work in a private office, rather than a hospital or academic setting. Factoring this preference into his decision would leave a career in the following specialties possible:

- Anesthesia
- Community Medicine
- Dermatology
- Diagnostic Radiology
- Family Medicine
- Ophthalmology
- Pediatrics
- Psychiatry

The End Game

Always consider where you want to end up living. If you want to settle down in Ottawa as a pediatric nephrologist, it does not matter much where you do your residency; you can complete it anywhere. But it is in your best interest to complete your fellowship in Ottawa. The main reason? More contacts and networking. It is easier to look for a job after fellowship if you know those working in your specialty in that area. Many job offers are not posted nationwide but disseminated within a closed circle in a community.

Location

Cost

In this regard, you have to reconcile your needs with the amount that you will be making. Consider that residents in the same province get paid the same, but that cost of living varies considerably between cities (e.g., Toronto versus London).

Outside Activities

What is there to do in the city? Do you have access to trails if you are into trail running? Is there live theatre if you like the arts? Life outside the hospital is critical, so these considerations cannot be overlooked.

Patient Population

Sometimes the patient population that we like dealing with (perhaps underserved areas) is not represented at all institutions. Sometimes this can be a powerful variable when deciding where to train.

Additional Factors (e.g., Family and Friends)

Significant Other

Always look at the demands of the residency in terms of normal work hours, call hours, and time required for studying as it will affect the amount of time you see your loved ones.

Your family has to live in the city where you end up, too. Will they have job opportunities in their chosen professions? Will they like the city? Keep in mind that an unhappy family will equal an unhappy residency.

Children

If you have children, you may consider whether your chosen city is a reasonable place for children to grow up. You may also have to consider child care and the nature of the public school system.

Camaraderie

The residency journey is often long and you will likely spend a lot of time within the hospital. Talk with residents to determine the climate in the program and whether it is friendly or unwelcoming.

As you read through each of the sections of this book, keep the features of each of the above variables at the forefront of your mind and they will help you refine your decision. Also keep in mind some variables may hold more importance than others in your career decision. The relative importance of these variables may play a role in your future career path. For example, if a medical student valued family life and interests unrelated to medicine to a greater degree, the student may be more interested in specialties that allow a flexible schedule.

A-5

THE DECISION ALGORITHM

Studies have shown that choosing a residency program is the most stressful aspect of medical training. The algorithm below may provide some structure to making the decision. Additionally, this algorithm highlights the importance of gathering information so that you can make an educated decision rather than on impulse or word of mouth. Furthermore, through usage of this algorithm, you may realize truths about career decision making. For instance, you may see that there is a crossover of responsibilities in a set of specialties (e.g., Emergency Medicine, Family Medicine plus Emergency and an internist who consults to the Emergency Room), each specialty has diversity in responsibilities, and there is variability in many career options; variability in day-to-day duties need not depend on your field of choice.

Self-Assessment

› You must be completely honest with yourself about your potential abilities, strengths, weaknesses, goals, and what you want and need in life. Also remember the variables mentioned in A-3 for determining what factors are most important to you.

Tentative Specialty Choices

› By identifying your strengths and weaknesses you will be able to make some tentative specialty choices.

› Read about these specialties, including the information included in the Program Profiles and Career Profiles. Talk to specialists. By matching your strengths, weaknesses, and interests, you will likely find that you can eliminate some specialties easily and put a few on the top of your list for further consideration. Begin by shadowing or observing physicians in fields that you think you may be interested in. This will allow you to gain a realistic appreciation of what the specialty offers. Many medical students find that their perception of a field actually differs from the real duties and routine of physician in that field. It is important to fully understand the fields you may be interested in.

Information Gathering

- › Now that you have tentatively narrowed down your search, you must get further information on the programs.
- › Talk to residents, clerks, friends, mentors. Attend career nights. Do mini-electives/observerships in these areas. Get a feel for all aspects of the life this specialty has to offer. At this point you are not trying to secure a position, but simply trying to make up your mind.
- › Gather as much information and experience as possible.

The following questions to ask your preceptor may serve as leading points of discussion to further your understanding of the specialty:

1. Why did you choose your specialty?
2. What are the top three things about your job?
3. What are three things you dislike about your job?
4. What else were you considering and why did you choose your specialty?
5. Do you have any regrets? What would you choose now?
6. How does your job affect your lifestyle?
7. Can you tell me about the job market?
8. How is the residency?

Commitment

- › Now that you have decided on your top specialty(ies), it is your job to do what is necessary to secure your desired position.
- › Find out what these programs require. Build yourself and your resume so that you are competitive. You might need to do research, take on a sport, do extracurricular activities, become more social, or work on your clinical and/or research skills.
- › Consider doing electives in the specialty, particularly in the location you want to match to. Also, if you have an idea of which program and/or school you would like to attend for residency, try to “fit” your electives and extracurriculars to your choices. You want your activities to demonstrate your interest in that city and the specialty. Also consider the relative

importance of the factors listed in section A-3 in regards to which school and city are your best “fit.” For example, if someone was interested in community-based practice they may want to consider a less research-focused school.

In Case 9, Mambo and Adil had questions regarding commitment to a competitive residency programs such as Otolaryngology or Plastic Surgery. Like Mambo and Adil, many medical students try to demonstrate they “fit” within a specialty by pursuing a research project or shadowing physicians in that field. In Mambo’s situation, research in the form of case reports or a small clinical research project can be undertaken to demonstrate an interest in Plastic Surgery. In applying to programs at centres that focus on academic training, research is highly recommended.

Adil, in particular, had questions about changing his mind after investing time in one specialty. Such an experience can be put in a positive light to demonstrate that another specialty was considered and explored, and an informed decision not to pursue that specialty was made. Adil also wondered if he should have invested his spare time in pre-clerkship in committing to a career path. Surely the time spent can help him make a career decision and demonstrate an interest in the specialty, but the time can also be spent ensuring he is a well-balanced candidate.

They both had questions regarding electives. As mentioned in the text, electives should be completed in areas of interest. Asking residents for recommendations can facilitate arranging electives.

Mambo’s late decision to pursue Plastic Surgery concerned him; however, it may not be too late for Mambo. Successful applicants to competitive programs include students who decided both early and late. Mambo may take comfort in hearing that an earlier decision to pursue a competitive program is not a guarantee for entry.

Relief and Stability

- › By now you have made a quality decision, have chosen a specialty and one or more backups that suit you, and have begun to act in a way to secure it. You have chosen these specialties because they match most closely to what will make you (not your parents, friends, etc.) most happy. Keep up the hard work. Stay the course.

Anxiety

- › The time comes to submit your application. You have made a big decision and it is understandable at this stage to feel stress and anxiety due to the uncertainty of your future.

Decision Point

- › Try to stay confident knowing that you have done your best. At the end of the day, it’s likely that you will get one of your top three choices.

(Refer to Section G: The Application Process for a more detailed explanation of this step of the process.)

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Discipline Choices of Canadian Applicants 2011 Match

First Iteration

	Total First Choice Discipline	% Total Choices	Quota Offered	% Total Quota	Total Quota After Reversion	Quota Filled	Quota Vacant
Anatomical Pathology	11	0.4%	33	1.2%	33	23	10
Anesthesiology	133	5.3%	109	3.9%	109	109	0
Cardiac Surgery	7	0.3%	12	0.4%	12	8	4
Community Medicine	15	0.6%	24	0.9%	23	13	10
Dermatology	37	1.5%	23	0.8%	23	23	0
Diagnostic Radiology	97	3.8%	89	3.2%	89	85	4
Emergency Medicine	82	3.2%	60	2.2%	60	60	0
Family Medicine	859	34.0%	1151	41.4%	1150	991	159
General Pathology	1	0.0%	3	0.1%	3	1	2
General Surgery	121	4.8%	105	3.8%	106	106	0
Hematological Pathology	1	0.0%	2	0.1%	3	1	2
Internal Medicine	369	14.6%	411	14.8%	412	379	33
Laboratory Medicine	8	0.3%	13	0.5%	12	7	5
Medical Biochemistry	1	0.0%	6	0.2%	6	2	4
Medical Genetics	5	0.2%	8	0.3%	8	5	3
Medical Microbiology	12	0.5%	9	0.3%	10	9	1
Neurology	35	1.4%	42	1.5%	42	35	7
Neurology-Pediatric	6	0.2%	9	0.3%	9	9	0
Neuropathology	0	0.0%	3	0.1%	2	0	2
Neurosurgery	20	0.8%	19	0.7%	19	17	2
Nuclear Medicine	2	0.1%	9	0.3%	9	3	6
Obstetrics & Gynecology	103	4.1%	100	3.6%	100	97	3
Ophthalmology	62	2.5%	36	1.3%	36	36	0
Orthopedic Surgery	86	3.4%	81	2.9%	82	79	3
Otolaryngology	43	1.7%	29	1.0%	29	29	0
Pediatrics	175	6.9%	143	5.1%	143	143	0
Physical Med & Rehab	16	0.6%	23	0.8%	22	20	2
Plastic Surgery	46	1.8%	28	1.0%	28	28	0
Psychiatry	110	4.4%	147	5.3%	146	115	31
Radiation Oncology	23	0.9%	20	0.7%	20	20	0
Urology	42	1.7%	31	1.1%	32	32	0
Total	2528	100%	2778	100%	2778	2485	293

Section B

YOUR FINANCIAL LIFE

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This chapter offers practical advice and case studies to help you set up a realistic budget, manage your money, select insurance, and balance your personal and professional goals.

B-1

WHY MONEY MANAGEMENT MATTERS TO MEDICAL STUDENTS

As a future medical professional, you can expect a very rewarding future, both professionally and financially. But you may not have expected the key financial issues you'll need to deal with in the short term to help ensure that rewarding future.

For example, do you know the answers to the following questions?

1. What receipts should you save now so that you can claim significant future tax benefits when you start your practice?
2. What saves you more money — consolidating your student loans on graduation or paying multiple student loans to maximize tax savings from government interest?
3. What happens to government financial loans and support if you choose to take a leave of absence to start a family during medical school or residency?

You'll find the answer to these questions and many others in this chapter, or you can go online at <http://www.rbcroyalbank.com/student/medical>. And while you'll have many important financial decisions to make in the future, you don't have to make those decisions on your own. With special products and services tailored specifically to medical students, as well as RBC Student Champions to assist you, RBC Royal Bank can provide the expertise you need to meet your current financial goals and build a secure future. As you build your medical career, we're here to help you — every step of the way. To find a Student Champion, visit <http://www.rbcroyalbank.com/student/champions>.

B-2

THE KEYS TO SUCCESSFUL MONEY MANAGEMENT

You may be wondering — why focus on money management so early in your medical career? The answer is simple — successful money management is essential to help you reach the personal and financial goals you hope to achieve. As a resident, this is the ideal time to develop financial strategies that will start you on the road to long-term financial security.

These strategies can help you make decisions that enable you to balance your immediate financial needs with repaying the student debt you have accumulated — and at the same time start saving for the future.

There are five steps that will form the foundation for successful money management:

- › Controlling the outflow (budgeting);
- › Maximizing the inflow;
- › Consolidating accounts to keep things simple;
- › Consolidating debt to reduce your cost of borrowing; and
- › Minimizing the tax you pay.

We'll go through each one in detail.

Control the outflow: Budget and track expenses

It doesn't matter whether you make \$7,000 or \$700,000 a year: budgeting (balancing what you make with what you spend) is an essential step to minimizing debt and avoiding financial problems in the future.

Preparing a budget helps you plan how you'll spend your money, so that you don't develop a lifestyle that you can't afford. It also lets you build in essentials you may not have considered, such as a savings plan to set aside money for future goals.

The secret to budgeting is to accurately determine what your income and expenses are each month, so that you have a plan that realistically reflects your personal situation. On the expense front, you'll want to think ahead to the actual expenses you'll be incurring during your residency. For example, if you're used to accommodation costs in a smaller urban centre but plan to do your residency in a major city such as Vancouver, Calgary, or Toronto, you'll need to increase your budget amount accordingly because your accommodation costs will likely be considerably higher.

Filling in the following budget worksheet will help you understand your personal cash inflow and outflow or use our online budget tool at <http://www.rbcroyalbank.com/student/medical/budgetcalculator>.

Annual Budget Worksheet

	Student/Resident	Spouse	Total Family
<p>Income</p> <p><i>Record your annual after-tax income from the following sources. If you're unsure of any amount, provide a conservative estimate.</i></p>			
Salary			
Self-employment/business			
Scholarships/ bursaries			
Parental contributions			
Gifts			
Other (e.g., investment income)			
Total income			
<p>Expenses</p> <p><i>Estimate your expected annual expenses for the items listed. If you're not sure how much to allocate for a budget item, you may want to keep a daily journal of how you spend your money. Record every expense for an entire month, and then project each expense item into an estimated annual amount.</i></p>			
<p>Food and housing</p>			
Food			
Mortgage or rent (annual)			
Property taxes and property insurance			
Power/heating/water/cable/phones/pager/internet/security alarm			
Housing maintenance/condo fees			
Refurbishing/renovating/moving costs			
Other			
Total food and housing			
<p>Transportation</p>			
Annual lease or car loan payments			
Insurance, licence, and registration			
Gasoline			
Maintenance and repairs			
Public transportation and parking			
Other			
Total transportation			
<p>Education</p>			
Tuition			
Books, subscriptions, instruments			
Exam fees			
Professional fees			
Malpractice insurance			
Conferences			
Total education			

Annual Budget Worksheet (continued)	Student/Resident	Spouse	Total Family
Investments and savings			
<i>RSP contributions</i>			
<i>Other investments</i>			
<i>Emergency fund</i>			
Total investment and savings			
Transportation			
<i>Line of credit payments</i>			
<i>Student loan payments</i>			
<i>Insurance premiums — life, health/dental, disability, critical illness, etc.</i>			
<i>Prescriptions/vision care</i>			
<i>Clothing/dry cleaning/grooming</i>			
<i>Clubs/fitness, hobbies/entertainment, dining/restaurants</i>			
<i>Gifts/charitable contributions</i>			
<i>Child care</i>			
<i>Professional services (e.g., accountant)</i>			
<i>Vacations</i>			
<i>Other</i>			
Total lifestyle/loans			
Total income			
Cash flow summary			
<i>Total income</i>			
<i>Less: Total expenses</i>			
Surplus (deficit)			

Prescription for Budget Success

The budget worksheet provided here is a great place to start developing your personal budget spreadsheet. Here are some tips that can help make the budget process a success for you:

- › **Regularly update income and expenses.** Reviewing your income and expenses at least monthly allows you to catch overspending early, before it becomes a problem.
- › **Use a spreadsheet program.** There are many automated budget programs available for home use that make keeping track of your monthly budget more time-efficient and give you detailed breakdowns of how your actual spending compares with your monthly budget.
- › **Look for small savings.** Create budget room by looking for savings on regular small expenses. Even giving

up your daily latte and muffin, or brown-bagging your lunch one day a week, can yield surprising savings, particularly if the money you save goes toward reducing your debt or investing.

- › **Create a paper trail.** Using your debit and credit cards (provided no fees or interest charges apply) takes some of the guesswork out of expense tracking. Even just a day or two after making a cash purchase, it can be difficult to remember what you spent your money on. Debit and credit receipts allow you to record your expenses at a later date that's convenient for you. An added benefit to using credit cards is that they offer purchase protection, which means that you won't be on the hook for charges made if your card is stolen and used by someone else.

If you have a budget surplus, you're in the fortunate position of having more money each month than you need. You may want to increase your monthly investment amounts or pay down your loans more quickly.

If you have a budget deficit, you'll need to look at ways to cut expenses. Can you reduce any of your lifestyle expenses? If not, you may need to decrease the amount you contribute to your investments, or perhaps reduce the monthly payments on your loans.

Once you've developed your budget, recording expenses on a regular basis is a great way to ensure you stay on track financially, and it allows you to make adjustments if an item exceeds your budgeted amount. It's normal to go over-budget on certain items from time to time, but if it happens on a regular basis, you'll want to consider whether you need to adjust your budget — or adjust your spending.

Maximize the inflow: Apply for scholarships and bursaries you may be entitled to

The use of scholarships and bursaries that don't require repayment can significantly reduce your debt load at graduation. You may think your scholarship application will be refused, but don't be your own selection committee. Apply even if you're not sure you're eligible. And remember — not all scholarships are based on academic achievement. The financial aid office at your medical school will be able to tell you the criteria used in awarding scholarships and bursaries, and can help you apply for the awards best suited to you.

Many medical schools offer scholarships and bursaries automatically, so you may not even need to apply for them. The financial aid office of your medical school will be able to tell you if that is the case. There may also be funds available for emergency loans if an unexpected cash crisis occurs.

Some large employers offer scholarships to children of their employees, as do some trade unions or fraternal organizations. Ask your parents to check on your potential eligibility for any such funding.

Many people overlook smaller scholarships or bursaries, thinking they're not worth the bother of applying. But even small amounts can make a big difference in reducing your overall student debt load. A \$500 bursary may not seem like much when you're graduating with a debt load of thousands of dollars, but it's still \$500 that you won't need to borrow — and more than \$500 that you won't have to repay, once interest is factored in. Assuming a loan interest rate of 6%, that \$500 bursary would save you \$150 in interest over five years.

You can find comprehensive information about scholarships, grants, and bursaries at <http://www.canlearn.ca>. To find out about RBC Royal Bank Scholarships for medical students, contact your RBC Student Champion.

Keep it simple: Consolidate accounts

As we've seen, tracking income and expenses is a key part of smart money management. But for a busy student or resident, it can be hard to find the time — especially when you have multiple savings, credit cards, and investment accounts spread across several institutions.

Fortunately, there's an easy solution: consolidate. Having all of your financial accounts with one institution makes it easier to monitor and track income and expenses.

There may be other benefits as well. Many accounts will pay higher interest rates on higher balances. And fewer accounts may mean fewer fees.

Reduce your cost of borrowing

As a medical student, you could have debt from a number of sources, including provincial or federal student loans, bank loans, bank lines of credit, credit card debt, and car loans. If you have outstanding debts from several sources, you may want to consider consolidating them into a single line of credit. There are two key advantages:

- ▶ **It's simpler.** Paying one bill a month is more convenient than paying multiple bills — and that makes it easier for you to understand the loan terms and stay on top of your payments, so you're less likely to inadvertently miss a payment date.
- ▶ **You may pay less interest.** Lines of credit generally offer a lower interest rate than fixed term loans, and they offer a much lower interest rate than credit cards. Lines of credit can also provide a convenient source of cash when you need it, without having to reapply for a loan whenever you need money, so they can be particularly useful in a financial emergency. In addition, a Royal Credit Line® offered by Royal Bank of Canada currently allows you to defer your principal repayments until 12 months after you complete your residency — when you'll likely be earning a much higher salary and have a much stronger cash flow.

There are two exceptions to the general rule in favour of consolidating debt. If you have government-sponsored student loans, the interest you pay may generate a tax credit, so you may want to maintain those loans. And if you've received a low-interest loan from a manufacturer as an incentive for a large purchase, like a car or furniture, you may want to keep that loan separate as well.

Pay less tax: Take full advantage of tax-saving opportunities

As a medical student or resident, you may be entitled to a number of tax-saving opportunities. Review the following strategies to make sure you're not overlooking deductions and credits that could save you hundreds or even thousands of dollars each year. The following reflect the federal rules; however, provincial rules are generally comparable.

Another opportunity to take advantage of tax-savings is claiming tax deductions relevant to caring for a child. This opportunity would be available to Lindsey and Rob from Case 1. For more information on the deductibles related to child care, see Section I: Case 1.

- ▶ **Claim tuition, education and textbook credits.** You are entitled to a tax credit of 15% of the following amounts: eligible tuition fees incurred, an "education amount" of \$400 for each month you attend medical school full time, plus a textbook amount of \$65 for each month that you qualify for the \$400 education amount.

If you don't need to claim the total of these amounts to reduce your federal tax to zero, you can carry forward the unused amounts to claim a tax credit in future years, or transfer up to a maximum of \$5,000 of the unused amounts to a supporting relative, such as your spouse, parent or grandparent. Keep in

mind that if you carry forward any portion of the unused amounts, you cannot transfer it to someone else in a future year.

Ruth had heard classmates discussing saving receipts for income tax. This could be helpful because she can receive a tax credit or carry forward this credit that can be used against current or future income.

› **Claim moving expenses.** If you move within Canada, at least 40 kilometres closer to a new work location to complete your residency, you can deduct many of your moving expenses from the income you will earn in that new location.

Eligible expenses include personal travel costs associated with the move, meals and accommodation costs while en route, moving and storage charges, and temporary accommodation costs for up to 15 days. You can also carry forward these deductions to a future year.

› **Take advantage of transferable tax credit amounts.** The tuition, education and textbook amounts are transferable. So if you don't need these amounts to reduce your tax payable to zero, your spouse can use them to reduce his or her tax.

It works the other way round, too — that is, if your spouse has credit amounts that he or she doesn't need, you can use them to reduce your taxes.

The True Cost of Paying with Plastic

Credit cards can be great. They're convenient, widely accepted, easy to use and offer some fraud protection. But if you're in the habit of carrying a balance, they can also be extremely expensive.

For example, suppose you decide to take the summer off and travel Europe. You figure it will cost you about \$5,000. You don't have the cash, but there's plenty of room on your credit card.

But if your credit card charges interest at an annual rate of, say, 18%, your \$5,000 balance will rack up interest charges of \$900 a year. That's an expensive way to pay for your trip.

B-3

SAVING FOR YOUR FUTURE

At this early stage of your medical career, your primary focus is probably on reducing your debt. While this is certainly an important objective, now is also the best time in your life to start building wealth for your future. And while it may seem that you have no excess funds and that investing is a far-off goal, a review of your budget and your spending habits might prove otherwise. You can start to invest with as little as \$25 per month.

As a younger investor, you can take maximum advantage of two of the most powerful wealth-building tools available: time and compounding. Even small amounts set aside regularly at this stage can grow to a significant sum over time.

Although your salary as a resident will be relatively modest compared with what you'll earn later in your career, you can use time to your advantage and make the most of your earnings. And developing a commitment to savings at this stage in your career is a habit that will stay with you and enhance your long-term financial security as you move through the different stages of your career.

Where to begin? By focusing on three simple strategies, you'll find yourself well on your way to a secure financial future:

- › Commit to a regular savings schedule.
- › Contribute to an RSP.
- › Make your money work for you.

Commit to a regular savings schedule

You can make saving easy by "paying yourself first" — with an automatic savings plan. Paying yourself first means having part of your paycheque deposited directly into a savings or investment account, whether that's an RSP or not, depending on

your savings objectives. This reduces the likelihood that you'll spend the money elsewhere, and it allows you to allocate part of each paycheque to your specific financial goals.

As your salary grows, you can increase the amount you set aside, so that the same percentage of each paycheque is automatically deposited. And as you reduce your debt load, you can increase the percentage of your paycheque that is automatically deposited. This allows your savings to keep pace with your financial needs, which are likely to increase over time.

Don't worry if you can contribute only a small amount of each paycheque. With time on your side, you'll be amazed at how quickly your savings can grow.

Contribute to an RSP

As a student or resident, your retirement is easily 30 or 40 years away. In fact, you probably haven't given it much thought.

But even though retirement is not top of mind, you should definitely be thinking about contributing to a registered Retirement Savings Plan (RSP). An RSP is one of the best tax breaks available to Canadian wage-earners, and a powerful saving tool.

An RSP provides two main advantages:

- › **Tax-deductible contributions.** You can deduct the amount of your RSP contribution from your income in the current year. A \$1,000 contribution will generate a tax benefit of \$300 if your marginal tax rate is 30%.
- › **Tax-sheltered investment earnings.** The investment income you earn inside your RSP isn't taxed until it's withdrawn. Because the earnings compound tax-deferred, they grow much

more quickly than in a non-registered account. And starting early pays off. The more time you have to benefit from the tax-sheltered growth, the more quickly your savings will grow.

There are limits on the amount you can contribute to an RSP each year. For 2011, your RSP contribution limit is 18% of your 2010 earned income or \$22,450, whichever is less. If you can't contribute the maximum, the unused contribution room can be carried forward indefinitely, increasing the amount you're allowed to contribute in future years.

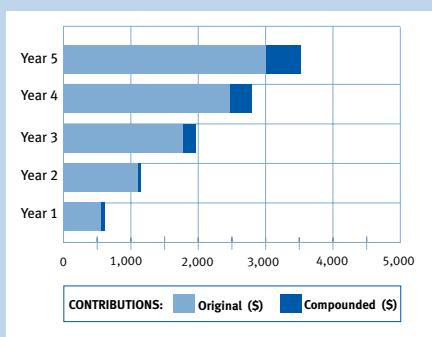
In addition, your RSP doesn't have to be just for retirement — it can also help you buy your first home. Under the Home Buyers' Plan, first-time homebuyers can borrow up to \$25,000, tax-free, from their RSPs to buy or build a home. For a couple, that can mean \$50,000 toward their first home.

Some restrictions apply, and the amount must be repaid over 15 years. If you miss a repayment, that amount will be included in your taxable income for the year.

You may also withdraw from your RSP up to \$10,000 per year, tax-free, to a maximum of \$20,000 in total, under the Lifelong Learning Plan, to finance full-time training or postsecondary education for yourself or your spouse. The withdrawals can only be made over a maximum period of four calendar years. The amount withdrawn from your RSP must be repaid over a 10-year period.

Modest Amounts Can Grow Quickly

With time and tax-deferred compound growth working for you, even small amounts add up fast. For example, if you set aside just \$50 each month for your RSP, earning 6% annually, you'll have more than \$3,500 in your account after five years. This amount does not include any tax refunds you may have received as a result of your contributions.



Source: http://www.rbcfunds.com/tools/mpp_calculator.html

Time Your Deductions

There's no rule that says you have to claim your RSP deduction in the year that you make the contribution. This gives rise to a strategy that can increase the tax benefit associated with your contribution.

Here's how it works. Suppose your marginal tax rate this year is a modest 20%. If you contribute \$500 of eligible contribution to your RSP and claim a deduction, you'll see a tax benefit of $\$500 \times 20\% = \100 . But look what happens if you make the contribution but don't claim a deduction. Instead, you claim it next year, or any time in the future, when your marginal tax rate is higher, say 45%. Your \$500 contribution will now generate a tax benefit of $\$500 \times 45\% = \225 . And in the meantime, it will have been growing, tax deferred, in your RSP.

Make your money work for you

Committing to a regular savings plan is an important first step toward financial security. But simply saving money isn't enough. Savings accounts typically pay interest of only 1% or 2% annually. If you want your money to work harder, and grow more quickly, you need to invest it.

Investing means setting up a diversified portfolio with investments in each of the three main asset classes: equity, fixed-income, and cash.

Each asset class has a different purpose: equities provide long-term growth but are subject to short-term fluctuations in value (volatility); fixed-income investments provide regular income payments but may not be guaranteed; cash provides security.

Since you're just beginning your medical career, growth investments such as equity mutual funds should play a key role if you're saving for a longer-term goal. That's because growth investments offer potentially higher returns, and you should have enough time to ride out short-term losses caused by the ups and downs of the stock market.

You also need to consider your level of comfort with investment risk. Growth investments, such as equities, are volatile. While it's natural to want to avoid risk, with investments, greater short-term risk brings the potential for great long-term rewards. So choose a level of risk that allows you to meet your investment goals — and lets you sleep comfortably at night.

Anatomy of Investment Classes

Equities, or stocks, represent an ownership interest in the company that issues them. Company earnings may be distributed to investors (shareholders) in the form of dividends. The value of the shares fluctuates, giving investors an opportunity (they hope) to sell them for more than they paid. Stocks are generally riskier than bonds or cash investments over the short term, but historically have provided the highest investment returns over the long term. Dividends and capital gains are taxed at preferential rates if held in a non-registered account.

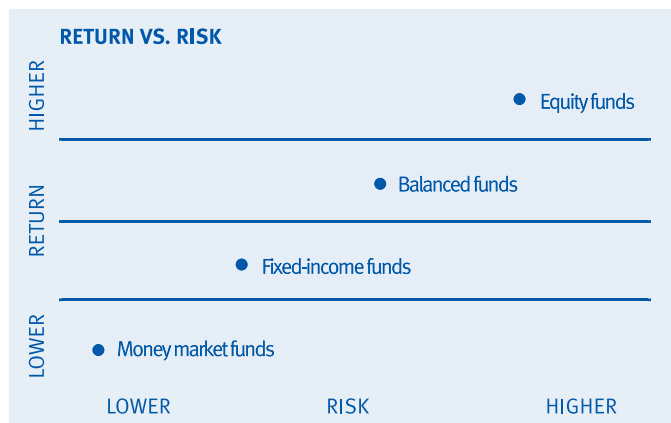
Fixed-income investments (bonds, debentures, and so on) are debt securities. Essentially, the investor lends a specified amount (the principal) to the company or government that issued the fixed-income investment for

a specified length of time (the term). At the end of the term, the investor gets back the principal amount. In the meantime, the issuing body pays interest to the investor, in return for the use of his or her money. Investing in fixed-income investments is usually less risky than investing in stocks, but the returns are generally lower.

Cash investments include savings accounts, guaranteed investment certificates (GICs) and treasury bills. Money market mutual funds, while not guaranteed, are considered cash investments because they provide low risk and easy access to your funds. Cash investments are designed to return your money, with interest, in less than a year. With cash investments your principal is secure, but you'll usually receive lower returns than you would from investing in the market.

Understanding the relationship between risk and reward

As an investment's potential return increases, so does its risk. It's important to find the balance of risk and return that's comfortable for you.



Unless you have experience buying and selling individual equities and bonds, you may be more comfortable investing through mutual funds, at least for the time being.

Mutual funds pool the individual investments from many investors into a single portfolio, which is then managed by a professional portfolio manager. Each mutual fund has an investment objective, and this objective determines the type of investments that the manager buys for the fund (equities, fixed income, cash or a mix of the three).

RBC Royal Bank offers a wide variety of mutual funds, and your RBC Student Champion can help you choose the right funds to meet your investment goals.

Three Tenets of Financial Success

- 1. Save regularly.** Save regular amounts over time, and reap the rewards of “paying yourself first.” This strategy also allows you to build “dollar-cost-averaging” in so that you always buy more when the price is low and buy less when the price is high.
- 2. Diversify.** Maintain a well-diversified portfolio with the growth potential you need to achieve your goals. Mutual funds are an excellent way to achieve this.
- 3. Maximize your tax-sheltered savings.** With its combination of tax-deductible contributions and tax-sheltered savings, your RSP should remain the focus of any long-term savings plan.

As a new doctor, your ability to earn an income is your most important asset — and it’s important that you protect that asset from financial risk. Insurance allows you to protect your future, your family, and your property from the financial consequences

of unexpected events. With adequate insurance coverage, you can help protect the financial benefits that a medical career can provide, even in the face of worst-case scenarios.

Insurance product	How it works	Benefits to you
<i>Disability income protection insurance</i>	Pays a monthly benefit if you’re unable to work because of illness or injury	Payments allow you to maintain your standard of living even if you are disabled and unable to work
<i>Critical illness insurance</i>	Pays a lump-sum benefit on the first diagnosis and survival of a serious medical condition (e.g., cancer, heart attack) covered by your policy	Gives you financial flexibility to cover additional costs associated with an illness, or to pursue lifestyle goals during or after recovery
<i>Life insurance</i>	Pays a tax-free, lump-sum amount to your beneficiaries upon your death	Assists your beneficiaries in paying off your debt if they choose to do so and maintaining their standard of living in the event of your death

Disability income protection insurance

Disability income protection insurance provides a monthly benefit if you’re unable to work because of illness or injury. Why would you want to purchase it now, when you’re young, in good health, and have a promising future ahead of you?

The answer is simple – the right time to buy disability income protection insurance is when you are healthy. If you wait until you need disability benefits, it will likely be too late to get coverage, as your application for disability coverage will often be denied or carry significantly limited coverage. As a young doctor, you are at the point of greatest risk because a disability could end your career even before it begins. Disability income protection insurance helps protect your tremendous future income potential.

In addition, there are a number of benefits to applying for disability income protection insurance coverage right now, before your medical career begins:

- Premium rates may be lower at younger ages.
- Some offers allow you to purchase coverage with no need for a medical exam or blood tests.
- For additional costs and depending on plan type, you may have the option of guaranteeing future coverage increases, without medical evidence, to match your future career growth.
- You may qualify for special premium discounts.

As a medical professional, you’re familiar with how often people are disabled and prevented from working. For adults in Canada of core-working age (25 to 54), 1.2 million are currently disabled (over 9% of the working population), according to a 2004 study by Social Development Canada.

The amount of disability benefits you can apply for is based on several factors, one of which is your income at the time of application. However, as a medical student, some plans recognize that you have not yet reached your full earning potential. They therefore allow you to purchase a greater benefit

than you would otherwise qualify for. In addition, if you pay for your policy with personal (after-tax) funds, as is the custom for most medical professionals, any disability benefits you receive might be tax-free. There are no limits on how you could use your disability benefits.

If you start a medical practice, you may also want to consider buying professional overhead expense insurance, which can pay for your office expenses if illness or injury prevents you from working.

Disability plans can vary widely, so be sure you understand how the coverage works with regard to the following:

Waiting period. Once you’re disabled, how long will you have to wait before the benefits start? Waiting periods can vary from 30 days to two years. The longer the waiting period, the lower your premiums.

Andy from Case 5 was stuck with a needle. Assuming he met the eligibility requirements of the disability insurance policy, he may have to wait a period of time before he can process a claim.

Payment period. Some policies pay benefits for two or five years. Others will continue to pay right up until age 65. Age 65 is by far the most popular benefit period, as it is the only payment period that pays a benefit for your entire working career.

Definition of disability. This is probably the most important provision to review. The definition of disability in your policy will impact the amount of premium you pay. There are three common types of disability definitions. With “any occupation” coverage, you’re considered disabled if you’re unable to work at any job for which you’re qualified by education, training, or experience. With “regular occupation” coverage, you’re considered disabled if an illness or injury prevents you from performing the duties of your regular occupation, and you are not working elsewhere. “Own occupation” coverage pays a benefit when you are disabled in your regular occupation, regardless of whether or not you are working elsewhere.

Critical illness insurance

As a medical professional, you might have seen first-hand how breakthroughs in medical treatments have increased survival rates significantly. Today, people often routinely recover from conditions that would have been fatal in the past.

For example, the Heart and Stroke Foundation of Canada estimates that 85% of all people who have a stroke will survive. The downside, unfortunately, is that 40% of stroke victims are left moderately to severely impaired. Ten percent are so seriously affected that they require long-term care.

As you can imagine, the financial repercussions of a critical illness can be devastating. And while disability benefits may replace a portion of lost income for a period of time, they may not be enough to cover the extra costs that can come with a critical illness — such as home renovations you might need to accommodate a wheelchair.

The type of insurance that would assist Andy from Case 5 in paying his student debts is Critical Illness Insurance. More information on the applicability of this type of insurance to Andy's case can be found in Section I Case 5.

Critical illness insurance was designed specifically to bridge this gap. It pays a lump-sum benefit on the first diagnosis of a serious medical condition covered by your policy. You must survive the diagnosis for a specified time for the benefit to be paid. Coverage amounts range from \$25,000 to \$2 million. Unlike disability insurance, you'll receive your critical illness insurance benefit even if you're able to work and you continue receiving your salary. You can use the benefit any way you want — to help pay down your debts including loans or mortgage, hire a full-time medical caregiver or seek medical treatment outside Canada, for example.

The medical conditions covered by a critical illness policy vary depending on the insurer. Almost all policies cover certain types of cancer, heart attack, stroke, and coronary artery bypass surgery. Many critical illness insurance policies will cover the following conditions: kidney failure, major organ transplant, blindness, deafness, loss of speech, paralysis, multiple sclerosis, coma, Parkinson's disease, Alzheimer's disease, loss of limbs, severe burns, occupational HIV infection, motor neuron disease, benign brain tumour, aorta surgery and heart valve replacement. Be sure to review any policy you're thinking of buying to determine exactly what conditions are covered.

Features to Look For in Your Disability Income Protection Insurance Coverage

Disability income protection insurance is readily available. As a doctor, or doctor in training, it's important to have comprehensive coverage that can accommodate a potentially high level of earned income. When comparing policies, look for the following features:

- › Competitive pricing for medical professionals that is guaranteed
- › Guaranteed policy terms
- › Choice of plan features
- › Option to increase coverage
- › Simple enrolment
- › Worldwide portability
- › Individual policy ownership
- › 24-hour coverage
- › Cost-of-living benefit
- › Coverage for HIV and Hepatitis B and C

Life insurance

Life insurance pays a tax-free, lump-sum amount to your beneficiaries upon your death. This cash payment can help ensure that your family maintains its standard of living if you pass away. As a doctor with a potentially high financial debt load, life insurance also provides your family with the means to pay off these outstanding debts or cover final expenses such as funeral costs. If you have few other assets, life insurance enables you to leave a legacy to your loved ones.

There are two main types of life insurance: term and permanent.

Term life insurance is designed to provide you with insurance protection for a specific period of time. If you die during that time period, your beneficiaries will receive a tax-free benefit. Term life insurance is a good choice when you are young and starting your career, because the premiums are usually lower than for permanent insurance, and you can get a lot of coverage for a relatively low cost. Your premiums will increase, however, at the end of the term if you choose to renew your insurance for another term.

Permanent insurance, as the name implies, stays in place for your lifetime once you purchase it. There are two types of permanent insurance: whole life and universal life. With whole life insurance, the premium is fixed when you purchase the policy. Premiums are usually paid in annual installments, which do not increase over the life of the policy. Universal life insurance combines life insurance with a tax-deferred investment component. Essentially, the premiums you pay in the early years are more than the actual cost of insuring you. The excess grows, tax-deferred, and you may be able to use it later to take a "holiday" from paying premiums, increase the policy's death benefit or borrow against it.

How Much Coverage Do You Need?

To calculate how much life insurance you need, you need to consider:

- › The amount needed to pay off all of your debts
- › Any final expenses and taxes that will be owing on your death
- › The amount your family will need to maintain its lifestyle
- › The education costs for your children

Other important types of protection

Professional liability coverage

One of the most significant financial risks you may face as a medical professional is a malpractice claim against you.

Awards and settlements for successful malpractice lawsuits can be in the millions of dollars. Even if a claim is without merit, you must still bear the cost of defending it — an expensive proposition in almost any case.

Professional liability coverage can protect you against the cost of defending and settling liability claims arising from the treatment of patients. Most Canadian physicians cover their medical malpractice needs with the Canadian Medical Protective Association (CMPA — see <http://www.cmpa-acpm.ca>). In fact, about 95% of doctors practising in Canada are members of this association.

The CMPA's reserve fund provides for the costs of future judgments, settlements, legal expenses and administration for claims related to all the medical care given by you in the current year and in the past. So even if you have stopped practising, and a claim arises from a procedure performed 10 years earlier, you will still be covered as long as the medical procedure was performed while you were a CMPA member.

CMPA membership fees vary by region and by the type of work that you practise. They are set annually, based on a review of claims and costs, estimates of liabilities for the year and projections of the income that your fees will generate over a period of years. While the premium costs can be high, most provincial governments offer a significant premium reimbursement package that is specialty-specific.

There are a wide range of medical practice options open to you, and the CMPA may not cover every work situation, so be sure to check the CMPA protection options carefully to ensure you are covered. If you provide professional services that are not covered by the CMPA, you should obtain additional professional liability insurance through a private insurer.

Automobile insurance

If you own or lease a car, you also need automobile insurance, which is required by law in all Canadian provinces. Here are some tips that can help you reduce your insurance premiums:

- › **Check rates before you buy or lease.** Car insurance rates are based on the claims history for the driver, and these rates can vary by thousands of dollars depending on the car.
- › **Insure all vehicles with one insurer.** Many insurers offer a “multi-vehicle discount” if you insure more than one car on the same policy.
- › **Use the same insurer for your auto and property insurance.** Many insurers offer premium discounts if you have both your car and your home insurance with them.
- › **Install an anti-theft device.** Your premiums may be reduced if you install an anti-theft device — and your car is less likely to be stolen.

Home insurance

Whether you own or rent a home, it's important that you have home insurance. Not only does home insurance cover your property if it is damaged, but it covers you for legal liability if your actions harm others, whether or not those actions occur in your home.

In general, there are two types of policies. Broad policies cover the building for all risks, other than the exclusions listed, while contents are covered for the named perils listed. Named perils include fire, theft and vandalism. Comprehensive policies cover the building and contents for all risks, other than the exclusions listed.

Make sure your policy covers everything you want to protect. If you have special property — such as computers or musical instruments — you may need to buy additional coverage to be fully protected.

Out-of-province health insurance

If you are travelling outside Canada, either for pleasure or to study abroad, we recommend buying travel insurance before you leave home. Your provincial health insurance plan may provide only limited coverage for emergency medical treatment and hospital costs outside Canada.

And if you will be away from your home province for a considerable time period (usually six months or more), you may have to apply to your provincial health insurance plan to maintain provincial coverage during your absence. If your spouse and children are going with you, they may also apply to have their coverage maintained.

As a medical professional, the financial dreams for your future may be more extensive than for many Canadians. One of the best ways to realize those dreams is to develop a plan that clearly defines your goals. Some of those goals will be short term, like buying a car and paying off your student debt. Others will be medium term, like saving for your children's private or postsecondary education or buying a vacation property. And others will be long term, like saving for retirement.

Opening a practice

Opening a practice can signal the start of a satisfying and lucrative career, but there are a number of issues to consider. Before you open your practice, here are some decisions you will need to make:

- ▶ **Community.** Draw up a list of communities you are considering so you can investigate them. There are a number of factors to consider, from professional opportunities, to schooling for your children, to meeting the personal needs of you and your family.
- ▶ **Size of practice.** Do you want to work by yourself, in a small group, in a large group, or in a practice with multiple specialties? If you prefer a group practice, make sure that your practice style is compatible with the other members and that you share similar goals for the practice.
- ▶ **Office location.** Do you want to lease or buy property? Are you willing to build office space or undertake substantial renovations, or do you want existing office space? Is the location you have chosen convenient so that you can attract new patients?

There are numerous other steps involved in opening an office — including hiring office staff, obtaining all the necessary licences, and renting or buying the necessary equipment and furniture. You'll find a handy checklist at <http://www.rbcroyalbank.com/professionals>. In the navigation bar on the left, see Resources for Professionals.

Financing your practice

There are a number of financing options available that can be tailored to your needs. These include:

- ▶ **Term loans.** Term loans are ideal for funding the purchase of long-term assets or equipment necessary to your practice. You can also use them to finance business acquisitions or expansions, or to refinance existing debt. They are available with both fixed and variable interest rates.
- ▶ **Operating line of credit.** An operating line of credit gives you easy access to cash for your daily cash-flow needs. To reduce interest charges, you can arrange to have your operating line automatically paid down with any surplus from your deposit account balances on a daily basis. If your professional practice is unincorporated, you may be able to take advantage of “cash damming.” This tax-planning strategy converts the interest on your personal debts — such as student loans, mortgages and other personal loans — into tax-deductible business expenses. To implement this strategy, the gross revenue generated by your professional practice is used to pay off your personal debts. Then, to cover your ongoing business operating expenses, you use a line of credit or other loan facility. In effect, your personal debt is replaced by business debt, which makes the interest costs tax-deductible.
- ▶ **Business overdraft protection.** Overdraft protection gives you the peace of mind of knowing that your cheques will be honoured if you're overdrawn, so that you don't have to worry about your day-to-day cash flow.

Before you approach a bank for financing, you should develop a business plan. A business plan is a document that provides a

financial analysis of your practice and helps the bank evaluate your financial needs.

Your business plan will describe your services, analyze your potential source of patients, describe your marketing plans and project your income and expenses from the practice.

If you're unfamiliar with business plans, and don't have a friend or family member with business planning experience to act as a resource, you may want to hire a consultant to help you prepare your plan. Once your plan is prepared, it is a valuable tool for making sure you are on track to reach your practice goals, and it should be updated annually.

Sanjay from Case 8 wondered about how physicians who practice in a private office setting finance their business. Term loans, operating lines of credit and business overdraft protection are financing options available to tailor to the needs of physicians with their own offices. Sanjay might also be interested in the process of incorporating private practices.

Incorporation and your practice

Traditionally, doctors have operated their medical practices as sole proprietorships and were prevented from enjoying the benefits of incorporation available to other business owners.

But with changes in the laws governing incorporation over the past several years, all provinces now permit doctors to incorporate. And while incorporation isn't the right answer for every doctor, it can have significant benefits.

If you incorporate and your practice generates \$500,000 or less in taxable income (meaning income after expenses like salary and rent), any earnings that you retain in your company are taxed at a rate of about 18%. (The exact rate will depend on your province of residence.)

These retained earnings can eventually be paid out as dividends to you or another shareholder. In the meantime, they are taxed at a fairly low rate and can remain in the corporation and be invested. And by paying out dividends in a year when you or the other recipients have little income from other sources, they may be taxed at a lower rate. You might even structure your corporation using different classes of shares, with one class of shares for you and another class for another family member, and arrange dividend payments to attract the least amount of tax.

While incorporation can be a great benefit to many doctors, it may not be appropriate for you. In general, incorporation is not beneficial if you are salaried, have a relatively low income, or need all of your ongoing income to pay salaries and expenses.

And unlike other business corporations, a professional corporation for a doctor does not protect you personally against professional liability claims, so you must still ensure you have malpractice and other liability coverage you need in place. Be sure to consult with a tax professional, and your provincial College of Physicians and Surgeons, before making the move to incorporate.

Your RBC Student Champion Can Help

Your RBC Student Champion is here to help you identify — and reach — your financial goals. As your primary contact, your RBC Student Champion will provide you with banking, credit, and other tailored financial solutions to meet your needs.

And as you complete your residency and start your professional career, RBC Royal Bank will continue to provide you with a full range of personal and business products and solutions designed for you.

While some goals are shared by most people, like buying a house, some of your goals will be specific to your medical career, like owning a practice. Here are some goals — both personal and professional — that you may have, and some tips that can help you achieve them. You can also locate Student Champions online, at <http://www.rbcroyalbank.com/student/champions>.

Change in career path

In the past, professionals graduated from school and worked steadily until retirement. Today, career paths are more circuitous, and it is increasingly common for professionals to step off the path, or change direction entirely. Some professionals take leaves to raise a family, and others decide to explore other opportunities.

Starting a family

Raising children usually involves one or both parents taking time off work — a difficult task for busy medical professionals who are building a practice, need the income and are often self-employed. Planning in advance for an income reduction can reduce financial stress during a maternity or paternity leave.

If you start a family during your residency or while you are employed as a physician, you will be eligible for maternity or parental leave benefits under the federal government's Employment Insurance plan. Birth mothers are entitled to 15 weeks of maternity leave, and biological and adoptive parents (mother or father) are entitled to 35 weeks of parental leave benefits. The benefit amount is 55% of your average earnings up to a yearly maximum insurable amount of \$44,200 (in 2011). This means you can receive a maximum payment of \$468 per week.

If you are self-employed, you are not eligible for government maternity or parental leave benefits. However, your provincial medical association may provide both pregnancy leave benefits and parental leave benefits to physicians who have practised medicine or completed a residency program.

One of the advantages Lindsey from Case 1 may consider is guaranteed financial support while taking maternity leave during residency.

If you want to take an extended leave while you raise a family, the best way to realize that goal is to begin planning well in advance so that you can start a savings fund and reduce your debt.

Take care to not overextend your financial obligations. Ask yourself whether your family could carry your current debt load for one year on one salary. Try living on one salary to see if it is feasible. Consider any cost savings you may achieve by staying home — for example, you may be able to save on childcare costs, or you may need only one car.

If you know that there will still be a gap between your family income and your expenses, consider whether part-time work might be a solution. Many people find that working part-time allows them to enjoy the benefits of having a career while maximizing their time with their families.

Taking a sabbatical leave

While a career in medicine can be both rewarding and challenging, many professionals make strategic use of leaves or transition periods to undertake further study in their professions. Some use the time to provide medical services abroad, and others choose to travel for pleasure. Whatever the reason, a sabbatical leave can be an excellent opportunity to recharge your batteries and explore new opportunities.

Some employers offer sabbatical programs that allow you to self-fund a leave on a tax-advantaged basis. For example, you can draw three years' salary over four years and take the fourth year off. This allows you to reduce the taxes you pay in each year, and provides you with an income during your year off — and it does not involve any extra expense for your employer.

An unfunded leave requires a separate savings and investment strategy. To avoid further debt obligations, you'll need to save now for a future leave to avoid increasing your current debt load. Again, advance planning is the key to realizing this goal. Calculating the costs involved well before your actual leave starts lets you set money aside to pay for your sabbatical.

Financial security: The ultimate goal

How much does it take to provide financial security? A hundred thousand dollars? A million? There is no single answer. The amount of money needed to achieve financial security will vary by individual.

At its most basic level, financial security simply means having the resources you need to make life decisions and live your desired lifestyle without worry. Financial security can provide you with a number of career and life options, including early retirement, career flexibility and the freedom to pursue other interests. The earlier you realize financial security, the earlier those options are available to you.

One of the biggest obstacles that may stand in the way of your financial security is the difficulty you may have living within your means. At this stage of your career, when you have been managing for a long time as a low-income student, it is hard to imagine that you may have trouble living on a doctor's salary.

The problem many professionals face is that they borrow extensively to finance their lifestyles. Because of their high salaries, it is easy to arrange financing — and easy to become overextended.

For example, if you take on a \$750,000 mortgage, you'll be paying more than \$4,300 a month in mortgage payments — or more than \$52,000 a year — based on an interest rate of 5% for 25 years.

You'll also be paying more than \$558,000 in interest charges over that time period, in addition to paying back the principal

amount. That means payments of \$1.3 million in total. If you add car payments, a vacation home, and private school for your children, it can be difficult to keep up, never mind building wealth for the future.

One of the dangers of over-leveraging yourself is that you are required to keep working simply to pay for all the debt. That limits the options available to you — including the option of retiring early.

This doesn't mean that you shouldn't buy an expensive home or a vacation property, but before you do, examine your financial situation closely to see whether you can really afford it, or whether the cost to your financial security is too high.

Section C

RESIDENCY PROGRAM PROFILES

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This chapter will provide information on each of the specialties. The Program Directors of each specialty were surveyed about their specialty. This information is unedited and fairly subjective. However, it tells a real story about each specialty and how one person got in.



Background

A Word About Study Methods

In order to reassure you that this information is reliable and consistent, we outlined an a priori strategy for survey contact, administration, and follow-up. In this way we ensured that all Program Directors were contacted and monitored using a fairly rigorous approach. Below is a short summary of how the survey was administered.

The first step was to initiate correspondence with the Program Directors by sending them the invitation letter. They were contacted either by email, walk in, or telephone. If there were difficulties after numerous emails, then the Program Director was telephoned. Once contact was made, they were sent the program survey by email and were asked to return it in seven to 10 days or sooner. If the survey was not returned after seven days, another email was sent reminding the Program Director of the outstanding survey.

Prior to the finalization of the survey results, Program Directors who did not respond to the initial contact email were emailed again to try and encourage their participation. A submission deadline of three weeks was required to ensure the program's entry into this book.

In 2010-2011, all the program directors were contacted via e-mail and invited to either update the previous submission for their program, or in the case that a program had not previously responded, to submit a new program profile. If a program director did not respond, they were told that no changes would be made to the pre-existing program profile. We received more than 60 updated program profiles and over 20 new submission from programs that had not previously responded.

What We Found

Nearly 85% of the Program Directors returned the questionnaire after receiving numerous follow-up reminders.

There was considerable variation in response rates between specialties with some as low as 40% (e.g., Family Medicine) and others as high as 100% (e.g., Anesthesia). Some of the reasons cited by the section editors for lack of response were 1) directors refused to participate, 2) directors did not respond to any contact, and 3) students were directed to the CaRMS Website. Programs that did not participate in the survey were listed as DNP (did not participate) and are identified.

Note: Information regarding the Program Trends was compiled from statistics obtained from the CaRMS Website (<http://www.carms.ca>). Program Director contact information can also be found on the CaRMS website (<http://www.carms.ca>).

Further Training

In all specialties, residents have the opportunity to pursue further training. In this edition, we have outlined potential opportunities in each residency specialty section. Opportunities for further training from that residency program are listed in categories by their accreditation status. Most programs are classified as being accredited by the Royal College of Physicians and Surgeons, accreditation without certification (there is no examination or certification by the Royal College upon completion of the program), Certificates of Special Competence and fellowships offered without Royal College status. In some programs, opportunities are categorized in different categories more applicable to that specialty.

Alex from Case 4 was interested in specializing in treating Glaucoma. This career path involves further training after completion of an Ophthalmology residency program. Residents may choose to complete a fellowship to improve their odds of employment in a given specialty or simply out of interest in the field. More information about Alex and his pursuit of his specialty can be found on p. 212.

ANESTHESIOLOGY

Description of Specialty

Anesthesiology is a dynamic specialty that integrates physiology, pharmacology, and technical skills in the provision of perioperative care, critical care, emergency care, and pain management. Duties of an Anesthesiologist in the surgical setting include preoperative assessment, pain control, and support of life functions during surgery, and supervision of postoperative care in the recovery room. In the ICU, Anesthesiologists care for critically ill patients by providing airway management, cardiac and pulmonary resuscitation, advanced life support, and pain control. Anesthesiologists also work in the maternity unit, diagnostic imaging department, and pain clinic to provide acute and chronic pain relief. Accordingly, Anesthesiology is a relatively flexible and mobile specialty.

Overview of Program

All programs in Anesthesia are five years in duration. In general, the PGY1 year is a Basic Clinical Training Year that offers the resident exposure to a broad range of medical care. The PGY2-5 are designed to complete the requirements set out by the Royal College of Physicians and Surgeons of Canada. This consists of 30 months of clinical Anesthesia, six months of Internal Medicine and its subspecialties, six months of Adult, Pediatric and Neonatal Critical Care, and six months of elective time. Within Clinical Anesthesia, rotations are completed in Obstetrical, Cardiac, Neuro and Regional Anesthesia, as well as Pain Therapy.

Accredited programs

- › Anesthesia Research (if Clinician Investigator Program)

Certificate of Special Competence

- › Critical Care (3 years Anesthesia, Cardiac Surgery, Emergency Medicine, General Surgery or Internal Medicine required before entry)

Fellowships offered without Royal College Status

- › Acute and Chronic pain
- › Airway/Simulation
- › Ambulatory Anesthesia
- › Blood Conservation
- › Cardiothoracic Anesthesia
- › Chronic Pain
- › General Pediatric Anesthesia
- › Hepatobiliary Anesthesia
- › Neuroanesthesia and Trauma
- › Neurosurgical Anesthesia
- › Obstetric Anesthesia
- › Pain Management
- › Pediatric Anesthesia
- › Pediatric Chronic Pain
- › Pediatric Critical Care (3 years Anesthesia, Cardiac Surgery, Emergency Medicine, General Surgery or Internal Medicine required before entry)
- › Perioperative Medicine
- › Regional Anesthesia
- › Thoracic Anesthesia
- › Transoesophageal Echocardiography
- › Transplantation (Heart/Lung/Liver)
- › Trauma Anesthesia
- › Vascular Anesthesia

** See http://www.cas.ca/research/acuda_fellowships/ACUDA2006.pdf for a complete listing of durations and locations of Postgraduate Fellowships in Anesthesia.

2010 Quota – Total Positions 106

	Quota	IMG Quota
Dalhousie University	4	1
McGill University	7	–
McMaster University	6	1
Memorial University	4	–
Queen's University	4	–
Université de Montréal	9	–
Université de Sherbrooke	6	–
Université Laval	8	–
University of Alberta	4	–
University of British Columbia	10	–
University of Calgary	5	–
University of Manitoba	5	–
University of Ottawa/Université d'Ottawa	7	2
University of Saskatchewan	5	1
University of Toronto	15	3
University of Western Ontario	7	2

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Dedicated teaching staff. All subspecialty areas covered in program. Outstanding airway management training and simulator sessions.

Other Key Features: Strong Regional Anesthesia program with dedicated staff trained in Regional Anesthesia. Teaching block for junior residents (four weeks). Improved research initiatives and infrastructure.

Common Clinical Encounters: Unexpected hypotension in the OR. Cardiac ischemia in the OR. Unexpected desaturation in the OR. Major trauma with surgical shock. Massive hemorrhage intraoperatively.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40–48	2–4	No call
Second third of program	40–48	4–6	1/5
Final third of program	40–48	6–12	1/5

Research Expectations: Residents must undertake a research project as part of the program toward education goals for scholar/profession (CANMEDS roles).

Areas to Improve Program: Improve Regional Anesthesia teaching (currently under way). Further stress on research teaching and assistance.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Anesthesia. Intensive Care. Other.
- › **Other:** Anesthesia Elective. Anesthesia reference. Strong personal letter.

McGill University

Strengths: Varied clinical exposure with multiple hospital sites. Scheduling based on residents' educational needs.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: Clinic (hrs/week): N/A

Research Expectations: All residents highly encouraged to complete research project but not mandatory. Usually completed at PGY3-5 level. Amount of research done dependent on educational and career needs of individual resident.

Areas to Improve Program: Increased training of faculty in newer academic areas like management and quality assurance.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** General Anesthesia. Subspecialty Anesthesia: Pediatric/Obstetric/Cardiac/Regional. Pain: acute and/or chronic.

› **Other:** Solid academic record. Enthusiasm for specialty. Knowledge of long-term demands of career in Anesthesia.

McMaster University

Number of Reference Letters and Due Date: Three, due by CaRMS application deadline.

Personal Letter Information and Due Date: Personal letter submitted with CaRMS application and due by CaRMS application deadline.

Strengths: Full protected academic day per week with junior and senior academic components. 2:1 ratio of faculty to resident for optimal teaching exposure. Resident involvement in learning through simulation opportunities.

Other Key Features: All the necessary elements are available within the program to ensure that trainees have excellent training opportunities to meet the Royal College requirement for specialty practice in Anesthesiology. The emphasis of the program is to train individuals to be competent and safe practitioners. The residents and faculty members are dedicated to maintaining the program at the highest standard and work together to continually enhance the training opportunities.

Common Clinical Encounters: Full range of adult and pediatric anesthetic services offered at the four city hospital locations. Obstetrical Anesthesia opportunities. Preoperative clinics involving patient assessments and consultations in preparation for surgery. Acute pain service activities. Off-service medicine rotations in major specialties, Intensive Care and Coronary Care units.

Workload: First third of program: Regular rotations in the operating rooms at the major hospitals approximately four days per week. Clinic assignments on average of twice per month. Call as per the PAIRO contract but averages to 1 in 5 to 1 in 6 during anesthesia rotations and 1 in 4 during medicine rotations.

Second third of program: As above, with graded responsibility. Final third of program: As above, with graded responsibility.

Research Expectations: Throughout the training period, residents are expected to prepare one poster presentation and complete one research project for presentation at the annual resident research day. Other scholastic activities involving studies in adult education may qualify for research requirement.

Areas to Improve Program: Continue to augment the infrastructure for research opportunities. Increase the number of sites for elective experience to increase the exposure to variations in Anesthesia practice.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Anesthesia. Internal Medicine (Respirology, Cardiology). Critical Care.

› **Other:** Gain an understanding of the requirements and scope of the specialty practice. Understand the unique features of the various training programs. Pursue elective opportunities in the specialty of a sufficient duration to appreciate the nature of the specialty practice.

Memorial University of Newfoundland

Strengths: Small program. High faculty-to-resident ratio. High volume of hands-on clinical experience.

Other Key Features: Availability of patient simulator.

Common Clinical Encounters: Airway management cases. Emergency surgery for trauma. Neurosurgery. Cardiac cases. Other rotation specific cases.

Workload: Please see CaRMS Website for information.

Research Expectations: Residents take part in research at all levels of their training.

Areas to Improve Program: More full-time faculty.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Emergency room. Anesthesia. General Medicine.

› **Other:** Acceptable academic record and academic potential. Interest in the specialty. Information on clinical ability from reference letters.

Queen's University

Number of Reference Letters and Due Date: A minimum of three confidential reference letters are required from staff physicians. At least a practising anesthesiologist should write one of these three letters of reference. Three more letters of reference, while not necessary, will be considered in addition to the first three letters mentioned above, thus six letters of reference in total will be accepted.

Personal Letter Information and Due Date: A personal letter is required. Candidates may wish to describe important achievements, extracurricular activities, and personal goals

during residency or anything else that can give the selection committee an idea of who the candidate is as a person.

Strengths: Small, friendly department. Motivated faculty. Outstanding residents.

Other Key Features: Our program will train residents to be successful in their Royal College exams and become confident, competent consultants in Anesthesiology.

Common Clinical Encounters: Elective surgery. Emergency cases. Obstetrical anesthesia. Emergency airway management. Trauma surgery.

Workload	Hospital/ Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	80	5 (20 of those on call)	N/A
<i>Second third of program</i>	70	10-15 (20 of those on call)	N/A
<i>Final third of program</i>	60	20+ (15 of those on call)	N/A

Research Expectations: All residents are expected to do a research project between PGY2 and 4.

Areas to Improve Program: The success of our program depends on the residents themselves. We allow flexibility to cater to the needs and requirements of the residents; therefore, improvements required depend on the needs of the residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Anesthesia. ICU. Cardiology/Respirology.
- › **Other:** Do some electives so you are aware of what our specialty involves. Demonstrate some aptitude in Anesthesia. Be comfortable dealing with emergency, life-threatening situations.

Université de Laval

Strengths: Number and variety of clinical cases. Outstanding clinical teachers with different backgrounds. One teacher: one resident clinical day teaching.

Other Key Features: 35–40 residents in the five-year residency program. 6 sites of training and more than 100 clinical teachers. 4 months of electives. Up to three months of protected research time can be taken. Good exposition to regional anesthesia.

Common Clinical Encounters: Anesthesia for: General surgery, gynecology, obstetrics, urology, orthopedics, plastic surgery, neurosurgery, cardiac surgery, ENT, etc. Adult and pediatric. Everything in anesthesiology but hepatic and pancreatic graft. Well-organized intensive care units and pain clinics.

Workload	Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40–50	10–15	1 in 6
<i>Second third of program</i>	40–50	10–15	1 in 6
<i>Final third of program</i>	40–50	10–15	1 in 6

Research Expectations: One project per resident during the residency. Three months protected.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** A good knowledge of spoken and written French language is mandatory. An elective exposition to anesthesia is not an obligation.
- › **Other:** Contact our residents and get an inside perspective of our program.

Université de Sherbrooke

Workload	Hospital/ Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
<i>First year</i>	N/A	1 night/week	1 weekend/4
<i>Second year</i>	N/A	1 night/week	1 weekend/4
<i>Final year</i>	N/A	1 night/week	1 weekend/4

Resident: Clinical Teacher Ratio: 1:1

Research Expectations: The program encourages residents to participate in the creation and dissemination of emerging knowledge. All residents must prepare at least two presentations and are especially encouraged to participate in research projects to be presented at local, provincial, or national competitions.

Benefits of the Program Include: Four weeks of vacation, seven work days/year available to study for major exams, seven days available for conferences and expenses partially covered, time off for FRMQ conference, annual reimbursement toward residency program fees, conferences, and textbooks.

Departmental Resources Include: Up-to-date library, access to electronic Medline and Internet, clerical support (two), research nurse, A/V support, hand-held organizer.

University of Alberta

Strengths: Commitment of the program to provide the best possible training for our residents.

Other Key Features: Template for CanMEDS 2000 roles already well under way. Strong academic program. Residents have exposure to the simulator.

Common Clinical Encounters: Preoperative assessment of patients in the Pre-Admission Clinic. Regional Anesthesia for hip or knee replacement surgery. Invasive monitoring for open heart surgery. Inhalation induction of Anesthesia in pediatric groups. Assessment and treatment of patients for postoperative pain.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	80	2	1/4
Second third of program	60	5	1/4
Final third of program	50	20	1/5

Research Expectations: 1st year — none. 2nd year — design a project and present at Research Day. 3rd year — project in progress. 4th year — complete project and publish results. Funding is available for one year of research for those interested.

Areas to Improve Program: Residents should be more involved in teaching others. Seek ways to enhance clinical experience while on shorter rotations.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Exposure to routine Anesthesia. Pediatric Anesthesia. Chronic pain. ICU.
- › **Other:** Demonstrate your interest in Anesthesia by doing elective time. Good academic performance. Well-rounded life experience.

University of British Columbia

Number of Reference Letters and Due Date: Three reference letters, including at least one from an anesthesiologist or intensivist. These are due on the day before Program Webstation (PWS) can access applicants' files.

Personal Letter Information and Due Date: This personal letter should include your reasons for joining the specialty, the reasons why you wish to come to UBC for training, your particular attributes, and your career goals. In particular, you will need to include what characteristics you possess, based on specific examples from your own past experiences (both in medicine and outside of medicine) that you believe would make you a good Anesthesiologist. This letter should be about one to two pages in length. The due date is the same as for the reference letters above.

Strengths: Full academic day September to May. Anesthesia simulator. Broad clinical exposure.

Other Key Features: The selection committee is composed of both faculty and residents, and assesses two broad categories: the quality of the file as provided via CaRMS and the interview.

Both are done as objectively as possible, including the use of a standard interview, and are done by multiple members of the committee. Historically, we have offered invitations for interviews to approximately 50% of the CaRMS applicants. The medical school of the applicant, and where the Anesthesia elective was performed, are not criteria for selection. Students invited for an interview will be required to post their photographs to the CaRMS Website, to be made available to our program prior to the interview day.

Common Clinical Encounters: This is difficult to answer. There is a full range of clinical scenarios seen by our Anesthesia residents.

Workload: First third of program: All call is within the PAR-BC contract, which currently states no more than one-in-four call. From PGY2 onwards, during most, but not all, Anesthesia clinical rotations, residents are excused from clinical duties on the day prior to the night call and are excused from clinical duties post night call. Residents are also protected from clinical duties during the academic days, for which attendance is expected. Residents are expected to read around their clinical cases, around topics covered for the academic days, and to also complete their own reading schedules.

Second third of program: As above. Call during off-service rotations (e.g., Internal Medicine and Critical Care rotations) vary with the rotation. Most of these off-service rotations occur during the PGY3 year.

Final third of program: In the two weeks preceding the written and oral RCPSC examinations in the PGY5 year, residents are excused from all call, and for four weeks preceding these two exams are excused from all weekend call. Residents are encouraged to begin studying for the written examination in the PGY4 year. Much of the PGY5 year is spent developing skills for being a consultant specialist and preparing for the written and oral RCPSC examinations.

Research Expectations: The expectation is that all residents do at least one research project or quality assurance project sometime during their residency and present their project at the annual UBC Anesthesia resident research competition in June. The optimal time for this project is from the latter part of the PGY2 year to the PGY4 year (at the latest). Suitable residents may apply for the UBC Clinical Investigator Program (CIP), during which time a Master's degree could be obtained.

Areas to Improve Program: Larger physical space for academic days. Greater number of clinical rotations to accommodate the increasing medical school size and the number of Anesthesia residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Anesthesia.
- › **Other:** Fully understand what a career in Anesthesiology entails to ensure this truly meets your expectations. Spend at least one elective in Anesthesia to facilitate this and to generate a reference letter to demonstrate to us the referee feels you have the qualities that make you a good Anesthesia resident and ultimately a good Anesthesiologist.

University of Calgary

Number of Reference Letters and Due Date: Maximum three. Deadline published by CaRMS each year.

Personal Letter Information and Due Date: See CaRMS Website for details.

Strengths: Large group of dedicated faculty. Clinical volume and variety. Well-rounded residents daily feedback.

Other Key Features: Rotations for each year of training are pre-determined. Internal Medicine rotations are not done all at once. An elective in our program is not a necessity, but familiarity with our program is expected. Our Program Manual and Goals & Objectives Manual are easily accessible online.

Common Clinical Encounters: General Anesthetic, Regional Anesthetic, Regional Analgesia, including Obstetrical, Preoperative Consult, Trauma.

Workload: This does not vary systematically across the five years of training but differs significantly among residents — best to ask them for a range of responses. There is an academic half day each week and various rounds. Our online Program Manual contains a lengthy description of responsibilities, call requirements, and teaching.

Research Expectations: Requirements are not expressed in terms of the time spent or level achieved. The Scholarly Activity Log must be completed each year and two formal presentations at Residents' Research Day are required. Our department has a part time research assistant to assist residents with the development of their research projects. PGY1 resident now complete an intensive critical thinking course during which residents develop a research project that they are able to work on during their residency.

On-site simulator facility now up and running - residents now are able to access a number of sessions each year as well as many task oriented trainers. We no longer travel to Edmonton for simulator experience.

Areas to Improve Program: Increased departmental research infrastructure and involvement by staff.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Anesthesia, critical care, internal medical consults.
- ▶ **Other:** Get enough exposure to the specialty so that you understand what it's about. Demonstrate suitability to the specialty. Demonstrate the attributes of a good physician.

University of Manitoba

Strengths: Broad-based clinical exposure. Regional Anesthesia and acute and chronic pain management. Small program with excellent staff–resident relationship.

Other Key Features: This is a solid clinical program, with very good morale on both the part of residents and staff.

Common Clinical Encounters: Low-risk anesthesia in same-day admission setting. Labour analgesia. High-risk (thoracic, vascular, neuro) surgery. Pre-anesthetic outpatient clinic. Regional anesthesia for upper and lower extremity.

Workload: N/A

Research Expectations: Must do a scholarly activity project, up to six months of scholarly time, various options for scholarly work (clinical/basic science research, Q/A, reviews).

Areas to Improve Program: Improve scholarly activities structure and consistency—ongoing. Improve harmonization of goals and objectives with evaluation material for better clarity and consistency.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Anesthesia. Intensive care. Emergency.
- ▶ **Other:** Demonstration of critical care aptitude. Demonstration of manual skills. Demonstration of team abilities—all three

may be indicated by clinical assessments from relevant rotations and letters of reference.

University of Saskatchewan

Strengths: Commitment to individualized and personalized resident education. Highly qualified and strongly motivated teaching faculty, with excellent program resources. Commitment to excellence in clinical experience and academics, with optimized service requirements.

Other Key Features: Our five-year training program is fully accredited by the Royal College of Physicians and Surgeons of Canada. While complying with specialty training requirements, we strive to individualize rotations and electives according to resident needs and career goals. The program is organized for education and not service. Residents are released from clinical duties for core didactic seminars, which occur weekly on Friday afternoons with a full academic day, once every four weeks. The primary clinical experience is second to none, with all areas of subspecialty practice available. Research is mandatory and PGY2-4 residents must present annually at our Residents' Research Day. A funded and supported fully functional medical simulation program for all residents in place. This is led by the Director of Medical Simulation.

Common Clinical Encounters: Orthopedic procedures, emergent and elective. General surgical procedures, emergent and elective. Intra-cranial procedures, emergent and elective. Pediatric procedures, emergent and elective. Obstetrical procedures, emergent and elective.

Workload: Call generally varies throughout the residency from 1:5 to 1:8. Residents are released from clinical duties for core didactic seminars, which occur weekly on Friday afternoons with a full academic day, once every four weeks. We have monthly journal club/research meetings and an active Visiting Professor Program. Grand rounds and case rounds, with staff and resident participation, are weekly. Talk/case discussion rounds are held weekly as well. Throughout residency, adequate time is afforded for academic activity/reading, etc.

Research Expectations: Research is mandatory and PGY2-4 residents must present annually at our Residents' Research Day. PGY5 residents are encouraged to present but this is not mandatory. Presentations at major national meetings are fully funded and supported. Residents can become involved in research in any clinical department, basic science group, or in collaboration with the Western College of Veterinary Medicine.

Areas to Improve Program: More time to do what we want to do. More resources to do it with.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Anesthesiology. Intensive Care. Pain Management. A broad-based multi-disciplinary elective experience is encouraged.
- ▶ **Other:** Strong general clinical and Anesthesiology knowledge. Exposure to Anesthesiology (electives) and research methodology. Good interpersonal skills. Demonstrate your interest in Anesthesia by doing elective time. Good academic performance. Well-rounded life experience.

University of Toronto

Number of Reference Letters and Due Date: Three letters by CaRMS closing date.

Personal Letter Information and Due Date: Answer questions posted on CaRMS Website by submission date for CaRMS applications. Questions may change this year.

Strengths: Wide variety of cases and training sites. Extensive didactic and informal teaching program and use of anesthesia patient simulator. Excellent research opportunities.

Other Key Features: Excellent clinical exposure, dedicated talented teaching staff, highest research output in Canada (one of biggest in North America). Anesthesia simulator.

Common Clinical Encounters: Preoperative clinics, perioperative management. All subspecialty areas of Anesthesia: General, Neuro, CVS, Thoracic, Urology, ENT, Plastics, Pediatrics, Obstetrics, Transplantation, etc. Regional Anesthesia. Acute and Chronic Pain Management. Intensive Care exposure: three to six months. Six months of relevant Internal Medicine training: CCU, Respiriology, Nephrology, medical consults, elective.

Workload: 10-hour days, off after call. Currently 24-hour call (with a 4 hour break in the afternoon) at some sites and 16 hour call at the busier sites (i.e. start call at 1600 and finish at 0800). Call 1/5 on average. Reading depends on residents. Clinical commitments, frequency of call does not change from year to year.

Research Expectations: Research not mandatory but is encouraged. Usually commences in PGY3 year. Option to do Master's, e.g., M. Education or M. Epidemiology. May enroll in two-year Clinician Scientist Program with view to achieving Master's or Ph.D.

Areas to Improve Program: Improve communication — email helps. Improve evaluation of program by residents.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Anesthesia, Critical Care Medicine, any Internal Medicine or Surgical specialty.
- ▶ **Other:** Be aware of the scope and opportunities for Anesthesia. Some, but definitely not only, Anesthesia electives. Demonstrate an ability to contribute to the specialty.

University of Western Ontario

Strengths: Intermediate program size. High case volume and variety. Strong didactic and research programs.

Other Key Features: Balance of large volume of clinical cases (high acuity) and academic/research programs. Highly developed subspecialty programs. Friendly environment, Collegial relationship of staff and residents. Highly committed Program Director and postgraduate education committee. Excellent quality of life and community in London and surrounding Southwestern Ontario. Opportunity to pursue high-quality selective rotations in rural areas.

Common Clinical Encounters: Anesthesia for high-risk patients. Cardiac, Neuro, Transplant, OB, Trauma, Vascular, Thoracics. Active Preadmission program. Regional Anesthesia for upper and lower extremity. Strong multidisciplinary Pain Program. Strong off-service rotations in Cardiology, CCU, Adult and Peds ICU, Respiriology, Blood Bank opportunity for international electives.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40+	8	1:6 Off post call
Second third of program	40+	8	1:6 Off post call
Final third of program	40+	8	1:6 Off post call

Research Expectations: One research project including presentation. M.Sc. level courses taken as an elective.

Areas to Improve Program: Complete consolidation of services, which is already under way.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Anesthesia. ICU. Internal Medicine, Emergency Medicine.
- ▶ **Other:** Strong overall academic record. Solid letters of reference. Evidence of a high degree of integrity, maturity, and commitment.

Programs Not Responding

Université de Montréal

University of Ottawa – Ottawa and NOSM Streams

CARDIAC SURGERY

Description of Specialty

Cardiac Surgery is that branch of surgery concerned with diseases of the pericardium, heart, and great vessels. Some of the operative procedures employed include coronary artery bypass, valve repair or replacement, replacement of the aorta, heart transplantation, pulmonary thromboendarterectomy, and a myriad of procedures for congenital abnormalities. Cardiac Surgery is a demanding, technical specialty that entails working with an operating room team, including specialized nurses, pump technicians, and Anesthesiologists. New nonacademic cardiac surgery centres are slated to open in the near future.

Overview of Program

The training requirements of the Royal College of Physicians and Surgeons of Canada in Cardiac Surgery mandate six years of postgraduate training after medical school. The first two years are considered core years and include a broad base of clinical experience in General Medicine, General Surgery, Cardiac Surgery, Pediatric Surgery, Vascular Surgery, Cardiology, Respiriology, Emergency Care, and Intensive Care. This will prepare the resident for Part II of the MCCQE exam and the Principles of Surgery examination taken early in the PGY3 year. The PGY3 to PGY6 years include six months as senior resident in General or Vascular Surgery, six months as assistant resident in Adult Cardiac Surgery, six months as senior resident in Pediatric Cardiac Surgery, six months as senior resident in Thoracic Surgery, one year as senior resident in Adult Cardiac Surgery,

and one year of academic enrichment. For those considering an academic career, this can consist of a laboratory or clinical research year that may lead to an M.Sc. or Ph.D.

Accredited programs

- › Critical Care Medicine (3 years Anesthesia, Cardiac Surgery, Emergency Medicine, General Surgery or Internal Medicine required before entry)

Certificate of Special Competence

- › Cardiothoracic Surgery
- › Vascular Surgery (available to graduates of General Surgery, Cardiac Surgery, and Cardiothoracic residency programs)

Fellowships offered without Royal College Status

- › Adult Cardiac Surgery
- › Cardiothoracic Transplant Surgery
- › Pediatric Cardiac Surgery

2010 Quota – Total Positions 11

	Quota	IMG Quota
Dalhousie University	1	–
McGill University	1	–
McMaster University	1	–
Memorial University	–	–
Queen's University	–	–
Université de Montréal	1	–
Université de Sherbrooke	–	–
Université Laval	1	–
University of Alberta	1	–
University of British Columbia	1	–
University of Calgary	1	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	1	–
University of Saskatchewan	–	–
University of Toronto	1	–
University of Western Ontario	1	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Tremendous operative experience, including complex cardiac cases and emergencies. Residents perform the majority of cases where they scrub. High ratio of staff surgeon and clinical material to resident trainee. Infrastructure in place for residents to perform both basic science and clinical research of very high quality during their training.

Other Key Features: We are a small training program with unparalleled opportunities for learning complex cardiac procedures from direct surgical experience. In addition, the research opportunities in relevant basic science and clinical investigation at Dalhousie are second to none.

Common Clinical Encounters: Coronary bypass, including offpump techniques and exclusive arterial revascularization. Aortic valve replacement with a variety of approaches, including homograft, autograft, and stentless valves. Mitral repair and replacement, including complex bi-leaflet procedures. Thoracic aortic surgery, including thoracoabdominal aneurysms, acute

dissections, and traumatic tears. Surgery for heart failure, including mitral ring annuloplasty, ventricular remodeling surgery, and heart transplantation.

Workload: N/A

Research Expectations: There are no set rules about research but the typical resident will spend two to three years in dedicated research training, either clinical or basic science. These residents are strongly encouraged to obtain a graduate degree, and to enroll in the Dalhousie University Clinician Investigator Program. To date, of the six most senior trainees, two have earned Ph.D.s, and three have earned M.Sc. degrees. These are distributed evenly between clinical and basic science research. All residents who have taken dedicated research time in Halifax have managed a number of peer-reviewed publications in high-quality journals, and have made several presentations at national and international meetings.

Areas to Improve Program: More didactic teaching from our staff. A solution to the manpower needs of our service that has no negative impact on the training program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Cardiac Surgery, at Dalhousie if at all possible. Cardiac Surgery at another Canadian university, with candid evaluations by staff who work closely with them made available to us. Any other elective with an intense clinical focus and opportunity for significant student participation.

› **Other:** The applicant is urged to determine as accurately as they can whether Cardiac Surgery is the right field for them. In this determination, students should include an honest appraisal of the workload and lifestyle issues that accompany a successful career in Cardiac Surgery. Develop interests outside medicine and pursue them with a high degree of enthusiasm and excellence. The applicant with an excellent medical academic record, who also has significant accomplishments outside medicine, is hard to overlook. Learn to work cooperatively in a multidisciplinary team with real regard for all members regardless of professional background.

McGill University

Strengths: Excellent clinical and academic training. All facets of cardiac surgery — pediatric, transplant, valve repair, mechanical support, aortic surgery. Clinical and basic science research.

Other Key Features: Constant one-on-one teaching. Level I trauma centre.

Common Clinical Encounters: 1,200 cases/year. Cardiac surgery patients.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	N/A	N/A	1/3 home
Second third of program	N/A	N/A	1/3 home
Final third of program	N/A	N/A	1/4 home

Research Expectations: 1 year. M.Sc. Possibility of Ph.D.

Areas to Improve Program: Physicians' assistants.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Cardiology. Willingness to learn.
- › **Other:** Elective rotation.

University of Ottawa

Strengths: The University of Ottawa Heart Institute Cardiac Surgery Residency Program has a long history of accomplishment and success in the cardiovascular community in Canada. Residents are given a broad operative experience with appropriate supervision within a balanced work environment. The research exposure is excellent, with most residents becoming involved in major peer-reviewed studies, manuscripts, and international presentations. Finally, the greatest strength of Ottawa is the beauty of the city. It undoubtedly is one of the greatest places to live and raise a family. This factor combined with the excellence in delivery of cardiac care makes the Ottawa program second to none in preparation of tomorrow's cardiac surgeons.

Other Key Features: As a quaternary care center, all facets of adult cardiac surgery are treated in Ottawa. An independent active pediatric cardiac surgery Center with superb clinical results is also integral to the training program. Resident facilities for study and education are excellent. A unique characteristic of the service involves the close cooperation and integration of cardiac services in a dedicated independent building with close daily interaction with cardiology and cardiac anesthesia. There are frequent teaching rounds involving the attending staff as well as referring and consulting staff from the University for a variety of care issues.

Common Clinical Encounters: Residents are given the opportunity for a broad exposure to inpatient and outpatient cardiac surgery care. The program received complete accreditation with few recommendations for change from the Royal College. Every cardiovascular disease is treated including end-stage cardiac disease, transplantation, and pulmonary hypertension. The valvular training is superb in particular with extraordinary exposure to mitral valve repair.

Workload: Residents rotating on the service will spend between two to three days in the operating theatre. At most levels, residents will function as the first assistant or as the operator in senior years and the chief residency year. Residents are encouraged to attend outpatient clinics once weekly. On-call schedules will include in-house call of the ICU only in junior years; subsequent call is from home with the frequency contingent on PAIRO guidelines. All residents are provided a dedicated half day for academic work where they are excused from clinical duties.

Research Expectations: All residents are expected to participate in clinical and/or basic science research. Mentorship is provided from the attending staff as well as senior residents. Close integration of the research facilities geographically directly beside the clinical services facilitates the implementation of this process. Several of the attending staff have extensive research experience and financial support from peer-reviewed funding.

Areas to Improve Program: All centres face difficulties with providing optimum surgical exposure to residents at all levels and current financial constraints and budgetary considerations limit the potential for residents to be exposed to the best cases where they could complete the entire surgery from "skin to skin." Recommendations by the Cardiac Care Network of Ontario to the Ministry of Health have suggested the provision of a dedicated operating theater without time constraints where resources would be provided to facilitate teaching of this nature. We are lobbying to make this a reality.

MEDICAL STUDENT TIPS

- › We strongly support students who are interested in the Ottawa Program, to seek an elective with our unit. We try to facilitate the elective student to address questions with research before arriving in Ottawa so that they can integrate with the research team during their clinical elective. We encourage the medical students to attend the operating theater as often as possible to take advantage of this surgical experience and we also request that they attend all academic rounds and clinics with surgeons to optimize the quality of their rotation and their exposure to the surgeons.

University of Toronto

Strengths: Largest Cardiac Surgery service in Canada (three adult hospitals, one pediatric hospital). Strongest research (basic and clinical) in Canada. Dedicated surgeon teachers.

Other Key Features: N/A

Common Clinical Encounters: Coronary artery disease. Aortic valve disease. Mitral valve disease. Broad range of congenital cardiac diseases. Aortic aneurysms and dissections.

Workload: N/A

Research Expectations: None during 1st year. Master's level minimum. Doctorate or higher preferred at end of program.

Areas to Improve Program: Ensure adequate operative exposure (>4,500 cases per year/four hospitals). Ongoing knowledge evaluations of residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Cardiac surgery elective at University of Toronto Cardiac Surgery site. Research experience with a staff Cardiac Surgery researcher. Cardiology.
- › **Other:** Outstanding marks in medical school. Be prepared to work hard and to be rewarded with high "job satisfaction." Have an academic Cardiac Surgery career as your end objective.

University of Western Ontario

Strengths: Small number of trainees. Graded responsibilities (both ward and OR). Excellent didactic program. Cutting-edge robotics program. Excellent opportunities for research.

Common Clinical Encounters: Coronary and valvular disease. Critical care. Heart Failure.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	80	10–30	1:3 to 1:5
Second third of program	80	10–30	1:3 to 1:5
Final third of program	80	10–30	1:3 to 1:5

Research Expectations: PGY 3 year is “Academic Enrichment” and may be used for research. Many other opportunities exist. Research is not mandatory but is encouraged.

Areas to Improve Program: The congenital cardiac surgery rotation takes place in Montreal for six months during the PGY 5 year. Currently, additional funding is not available to assist with this.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Broad-based training in Medicine is encouraged.

Programs Not Responding

McMaster University

Université de Montréal

University of Alberta

University of British Columbia

University of Calgary

University of Manitoba

COMMUNITY MEDICINE / PUBLIC HEALTH AND PREVENTIVE MEDICINE

Description of Specialty

Community Medicine is a broad field encompassing General Preventative Medicine, Public Health, and Occupational Medicine. It requires knowledge and expertise in biostatistics, management, epidemiology, health education, and health services administration. Community health physicians work in public health departments, other governmental services, hospitals, public agencies, research and academics, and family practices. Community Medicine is also a specialty of particular relevance to rural and international health.

Overview of Program

The Royal College of Physicians and Surgeons of Canada requires five years of post-MD training in Community Medicine. This includes 1) one or two years of clinical training: Residents often complete two years of clinical training under the auspices of the Family Medicine Residency Program, leading to eligibility for certification in Family Medicine (CCFP); 2) a minimum of one academic year of course work in Community Medicine; and 3) a minimum of one year of Community Medicine field placements.

2010 Quota – Total Positions 24

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	1	–
McMaster University	1	2
Memorial University	–	–
Northern Ontario School of Medicine	2	–
Queen's University	2	–
Université de Montréal	2	–
Université de Sherbrooke	2	–
Université Laval	2	–
University of Alberta	2	–
University of British Columbia	2	–
University of Calgary	2	–
University of Manitoba	1	–
University of Ottawa/Université d'Ottawa	1	1
University of Saskatchewan	–	–
University of Toronto	4	1
University of Western Ontario	–	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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McGill University

Strengths: McGill's Epidemiology, Biostatistics, and Occupational Health programs are exciting and challenging, with opportunities for residents to choose from a wide variety of different research areas in public health. Most graduates go on to careers that continue to involve them in research activities, as public health physicians, planners, health department managers, or Epidemiologists. The large number of faculty members at the Public Health Department and at the University allow for a very low resident-to-faculty ratio, which provides for individualized resident support. The McGill program is associated with the programs of the University of Montreal and University of Sherbrooke, so all field placements in the three institutions are open to all residents.

Other Key Features: Strong academic teaching units of McGill University. Field placements are available in Quebec's Regional Public Health Departments of the Montreal, Laval, Montérégie, and Outaouais health regions. With an urban population of 1.8 million, the Montreal health region presents all the challenges of modern public health practice: empowering communities and neighbourhoods, dealing with poverty and undereducation, and communicating with different ethnic communities.

Common Clinical Encounters: Infectious disease control/immunization. Occupational and environmental health.

Health education and promotion. Planning and managing programs and health services. Health status assessment and surveillance/research and evaluation.

Workload: First third of program: Equivalent to first year of Family Medicine.

Second third of program: Academic work at the department of Epidemiology. Residents are not on call.

Final third of program: Mandatory placements/electives in Community Medicine and/or clinical rotations.

Residents who wish more clinical training may take up to one more full year, either in Family Medicine, or in other clinical or laboratory disciplines related to community health. This further clinical training may be either interspersed with the academic work of the Master's program and the field placements, or taken as larger blocks after academic training is complete. Residents are not on call.

Research Expectations: None in first year. Master's degrees in Epidemiology, Biostatistics, and Occupational Health at McGill University (depending on interest and previous academic training, possibility of Ph.D. or higher). Doctorate or higher.

Areas to Improve Program: More rural electives. Facilitate placements outside Quebec.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Elective(s) in any fields of community health during medical school or previously, including international health.

› **Other:** Elective(s) in community health during medical school or previously. Demonstrate ability to work in a multidisciplinary team. Demonstrate excellent communication skills.

McMaster University

Strengths: Common Clinical Encounters: Community Medicine residents are based in community and governmental health agencies and do not, per se, carry patient loads.

Workload: First third of program: This year focuses on the basic clinical rotations required by both the Royal College and Family Medicine, and is largely hospital-based. Two months of the PGY1 year are spent on an introduction to Community Medicine to orient residents to the available Community Medicine resources in Hamilton and begin preparations for their academic work.

Second third of program: These years are spent completing the requirements for certification in Family Medicine if the resident chooses that option, culminating in the examination at the end of year three. As well, residents begin the coursework required for the Master's in Health Research Methods (HRM), along with junior field placements in Community Medicine.

Final third of program: These years are spent finishing coursework required for the Master's in HRM and taking part in the more senior rotations in Community Medicine, culminating in the Royal College exams at the end of year five. Those undertaking the non-thesis option for the Master's should have completed the required courses by year four, while those pursuing the thesis option will have time to work on their theses

during years four to five.

Research Expectations: The Royal College requires five years of postgraduate training, which must include at a minimum one year of clinical training, one year of academic work in Community Medicine, and one year of Community Medicine and field placements. All residents, therefore, must complete 12 months of academic work. This is most commonly done through the Master's in HRM. This program offers both thesis and non-thesis streams; the non-thesis approach is recommended by the program in order to facilitate meeting core Royal College objectives. Courses are available in biostatistics, research, epidemiology methods, health policy, and economic evaluation, among others. There is flexibility to look at other options for the academic requirements, both at McMaster and within other accredited programs.

Areas to Improve Program:

- 1) Increase number of faculty involved directly in the program.
- 2) Increase awareness of the program and its offerings.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** None

› **Other:** 1) Interest in, and understanding of, Community Medicine; 2) Academic performance to date; 3) Sufficient academic ability to be admitted to and be successful in Master's training in Community Medicine.

University of Alberta

Strengths: A focus on the front-line practice of Public Health and Preventive Medicine. Close/frequent contact with preceptors. Flexibility to meet the individual interests of residents.

Common Clinical Encounters: Respiratory and gastrointestinal disease outbreaks. Environmental hazards to health. Consultation on immunization and blood borne pathogen exposure issues. Media interviews. Planning/evaluation of health promotion initiatives.

Workload	Hospital/ Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	5	1 in 4
<i>Second third of program</i>	10–20	30	1 in 4
<i>Final third of program</i>	45	10	1 in 4

Research Expectations: Part of the program is an academic year that leads to a Master's degree in Public Health (MPH). Other research opportunities are encouraged and available throughout the program.

Areas to Improve Program: Expand preceptor list for residents to attend short courses/conferences and academic teaching. Improve preceptor teaching feedback.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Public Health. Infectious Diseases. International Health.

› **Other:** Volunteer with a community or international health agency. Take a course in Epidemiology. Develop an

understanding of factors outside the health system that influence health.

University of British Columbia

Strengths: Flexibility to accommodate residents' interests and needs. International connections. Excellent M.HSc. program.

Other Key Features: N/A

Common Clinical Encounters: Outbreak management. Environmental health issues. Program evaluation. Communicable disease or other policy development. Research protocol development.

Workload: First-year program is academic training in MPH or M.HSc program at School of Population and Public Health. There is no on-call. However, course work-load is quite heavy. Second and third year of program: Second year of Family Medicine training at St. Paul's Hospital or Vancouver-Fraser Program. Other sites may also be available. On-call varies depending on rotation, but is usually one in four. Years 4 and 5 (standard program)—Core rotations in Public Health (15 months) and elective rotations (9 months). No hospital or clinical work, except as electives. Reading literature searches, etc. usually occurs during rotation time. No in-hospital call.

Research Expectations: Master's level training in year 1. Family practice research project in year 3. Annual presentation at Residents' Research Day for those in years 2, 4 and 5. Further research encouraged during placements.

Areas to Improve Program: Program is constantly making changes and improving including evaluation of new initiatives.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Rotation in a public health unit, with a Medical Officer of Health or public health at the Ministry of Health. International elective. Other "non-clinical" rotations, e.g., First Nations/Inuit health; environmental health; health promotion; health policy, etc.
- › **Other:** Know what Public Health and Preventive Medicine is. References relevant for Public Health both in referee selection and content. Give evidence of understanding of social determinants of health and interventions to improve population health. More information on the UBC PHPM website: www.spph.ubc.ca

University of Calgary

Strengths: Much of the academic experience is shared with M.Sc. and Ph.D. graduate students in Epidemiology, Community Health, and Biostatistics, providing a learning model of the multidisciplinary, cooperative working style necessary in Community Medicine. Residents may do a concurrent Master's degree. The program is flexible and provides exposures to a wide variety of community agencies and clinical settings. We try to use all activities as learning experiences, and endeavour to involve every Community Medicine specialist in Alberta in our program to at least some degree.

Other Key Features: Options to do concurrent Master's degree. Option to do CCFP during program; please visit our CaRMS Website to learn more.

Common Clinical Encounters: It is difficult to answer this question in the context of Community Medicine. Residents will gain experience in the full spectrum of problems in Community Medicine, including health promotion and disease prevention, program planning and business administration, communicable disease outbreaks, and environmental health issues.

Workload: First year: Residents begin with a two-month placement in one of the two Community Health Centres in Calgary, where they primarily work in the medical clinic, but are also exposed to the broader, primary health care work of the Centre. The third month is an introduction to Community Health, which combines an orientation to the Healthy Communities Portfolio of the Calgary Health Region (and, in particular, the Office of the Medical Officer of Health), with an overview course in the Department of Community Health Sciences taken with all the in-coming graduate students. This is followed by a nine-month (40-week) series of rotations in the acute care setting, covering Pediatrics, Internal Medicine, Obstetrics and Gynecology, Psychiatry, Emergency Medicine, and General Surgery.

Years 2 & 3: Residents combine formal academic course work with horizontal clinical rotations chosen to provide as much exposure as possible to the applied aspects of their course work, as well as exposure in blocks to both rural and urban health units.

Year 4: This year is intended to provide residents with the opportunity to explore career options and areas of special interest through elective course work and clinical placements, while consolidating their knowledge and skill base. The block placement with First Nations and Inuit Health brings into sharp focus previous learning about cultural diversity and an introduction to the Community Medicine specialist as consultant.

Research Expectations: Master's level optional. All residents are encouraged by the end of program to have prepared at least one manuscript suitable for submission to a peer-reviewed journal.

Areas to Improve Program: We strive for continuous improvement.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any elective in Community Medicine or public health.
- › **Other:** Investigate and discover the difference between Community Medicine and Family Medicine. Obtain some exposure to Community Medicine/public health and community action. Understand the determinants of health.

University of Manitoba

Strengths: Program allows for considerable flexibility in specific objectives based on residents' needs and career interests (within the Royal College guidelines) due to its relatively small size. Diversity of experiences available (e.g., urban, rural, northern, Aboriginal health). Option of co-training in Family Medicine available.

Other Key Features: The residents and accreditors have

commented positively on the flexibility and personal nature of the program and its administration.

Common Clinical Encounters: Outbreak investigations (e.g., hepatitis A, salmonella). Communicable disease-control policy development (e.g., STDs, influenza, immunizations). Emerging infectious disease control (e.g., West Nile Virus, SARS). Chronic disease prevention programming and policy (e.g., tobacco control policies). Response to environmental health concerns (e.g., air quality).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	20	20/yr
Second third of program	40	20	–
Final third of program	40	25	8/yr

Research Expectations: None during first year. Master's level residents do Master's course work in second or third PG year and most complete thesis. Doctorate or higher.

Areas to Improve Program: More frequent evaluations (residents have requested this and we are working on it). More exposure to subspecialties of Community Medicine.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Elective with a Medical Officer of Health. Community/Family Medicine elective domestically or locally. Infectious Diseases or Epidemiology.
- ▶ **Other:** Get lots of exposure to fields of public health and Community Medicine. Demonstrate commitment to principles of Community Medicine. Have references from people who can speak to these issues.

University of Toronto

Strengths: The diverse and capable group of residents who enter the program each year. The wide range of outstanding program resources, both training sites and program faculty (clinical, academic, and field-based). The flexibility of the program.

Other Key Features: The program is of moderate size (approximately 30 residents over the five years). As such, it has a sufficient “critical mass” of residents, but is also small enough to allow residents to pursue flexible and individualized training programs/“paths.” The program supports residents with the ability to meet the requirements of the CCFP provided the resident is accepted into the Family Medicine Residency Program, a graduate degree (e.g., M.HSc.), as well as Royal College certification (FRCPC) in Public Health and Preventive Medicine, and also become eligible to sit the American Board examinations in Preventive Medicine (FACPM).

Common Clinical Encounters: Identification, investigation, and management of communicable disease outbreaks (e.g., SARS). The identification, investigation, and management of environmental health issues (e.g., West Nile Virus, Walkerton). The development and evaluation of community health programs (e.g., smoke-free public places, bicycle helmet by-laws). An assessment of the health of a community (e.g., determining

the prevalence of smoking among teenagers). Working collaboratively with other individuals and community agencies on community health issues (e.g., fluoridation of drinking water).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1/4
Second third of program	15	0	0
Final third of program	50	10	1/7

Research Expectations: There is a required research project during the second year of family medicine. Interested residents do have the opportunity to pursue community health-related research during their graduate and field rotations components of their training. Commonly, during the graduate studies portion of the program, residents may choose a graduate program that provides an opportunity to complete a research thesis. In addition, residents often pursue field-based research projects during their field placements. The program organizes an annual research day with opportunities for residents to submit abstracts. When residents choose to pursue research projects, residency time and resources are available to them.

Areas to Improve Program: Our program is continually improving as opportunities are recognized and corrected. The program was reviewed through the accreditation process in 2007. Only minor concerns were identified, which are being addressed.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Elective in a local public health unit, working with a Community Medicine-trained Medical Officer of Health (or Associate). Elective in the public health division of a provincial Ministry of Health, working with a Community Medicine specialist, any other elective, working with a Community Medicine specialist (contact Dr. E. Rea for assistance at e.rea@utoronto.ca).
- ▶ **Other:** Attain a sound understanding and familiarity with the practice of Community Medicine. Determine why you are particularly suited to train and practise in Community Medicine. Gain at least one hands-on experience working with a Community Medicine specialist.

Université de Montréal

Strengths: The program is well organized. We ensure that the resident will receive the necessary supervision and relevant training activities in each rotation. The requirement that residents complete a Master's degree ensures that they receive solid methodological training as well as organized instruction in research. The Montreal Public Health Department (MPHD) is the main training site. This is a rich environment which includes various types of expertise in numerous areas of intervention. The MPHD employs high-calibre professionals able to provide support to the resident. There is a wide range of academic activities and a fertile environment enriched by the interaction of two university cultures, McGill University and the Université de Montréal. The program is flexible and is able to adapt to changing realities as well as to the diversified interests of the residents.

Other Key Features: The Master's degree in public health is

accredited by the Council on Education for Public Health. Candidates certified by the Royal College of Physicians and Surgeons of Canada in Public Health and Preventive Medicine may be eligible for certification in Occupational Medicine, a program that is now also offered at Université de Montréal. The program is flexible, arrangements are possible for those who want to do family medicine as part of their public health and preventive medicine program. Public health and preventive medicine is a must for any student concerned about applying health strategies that will have an important impact on individuals and communities. Unique sets of skills are developed by public health physicians which guarantees a very dynamic and stimulating professional life.

Common Clinical Encounters: Public health and preventive medicine practice enables the resident to encounter a wide variety of conditions that can be prevented or treated through individual or population based approaches. These conditions include chronic and communicable diseases that span all common forms of diseases or diseases pathways. They include all types of cancers, childhood diseases, traumas, HIV, etc. The resident learns to use surveillance to monitor disease in populations, to use measures of protection in order to respond to emerging disease or emergencies. The resident will also learn and use disease prevention and health promotion strategies. Covered domains include environmental health, occupational health and communicable diseases using both individual clinical encounters and population based approaches. Health services management and planning is also an important part of the program.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First year of program</i>	40	10	Depends on rotation
<i>Second and third year of program</i>	Masters degree (usually)	Masters degree (usually)	Several weeks with calls in Communicable diseases
<i>Fourth and fifth year of program</i>	40	10	Several weeks with calls in communicable diseases and environmental health

Research Expectations: Most students will contribute to at least one scientific publication before the end of their residency programme.

Areas to Improve Program: Our teaching staff is aging and recruitment is difficult in our sector because of the policies intended to ensure a better distribution of medical staff in the regions. This presents a threat, but also an opportunity for prospective residents that want to be involved in academia.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Experience in public health or community medicine is an advantage.
- › **Other:** Rudimentary knowledge of French is mandatory.

Programs Not Responding

Northern Ontario School of Medicine

Queen's University

Université de Sherbrooke

Université Laval

DERMATOLOGY

Description of Specialty

Dermatology is a diverse specialty that concerns the medical aspects of primary skin diseases and disorders, as well as the cutaneous manifestations of systemic diseases. Dermatologists are experts in the living gross pathology of the skin and visible mucous membranes. The many areas that the Dermatologist must be knowledgeable about include immunologic cutaneous mechanisms, primary diseases of the skin, and diseases of internal medicine, pediatrics, infectious disease, and other specialties.

Overview of Program

Specialization in dermatology requires five years of residency training, generally including two years of basic clinical training in Internal Medicine, Pediatrics, and other relevant fields; two years of training specific to dermatology; and one year that may include research, teaching, or an approved course of study relevant to the objectives of dermatology.

Fellowships offered without Royal College Status

- › Immunobullous diseases
- › Medical dermatology
- › Mohs Surgery
- › Wound Care
- › Allergic Contact dermatitis
- › Pediatric dermatology
- › Cosmetic dermatology

2010 Quota – Total Positions 23

	Quota	IMG Quota
<i>Dalhousie University</i>	1	–
<i>McGill University</i>	2	–
<i>McMaster University</i>	–	–
<i>Memorial University</i>	–	–
<i>Queen's University</i>	–	–
<i>Université de Montréal</i>	2	–
<i>Université de Sherbrooke</i>	2	–
<i>Université Laval</i>	2	–
<i>University of Alberta</i>	1	–
<i>University of British Columbia</i>	3	–
<i>University of Calgary</i>	2	–
<i>University of Manitoba</i>	–	–
<i>University of Ottawa/Université d'Ottawa</i>	2	–
<i>University of Saskatchewan</i>	2	–
<i>University of Toronto</i>	4	1
<i>University of Western Ontario</i>	–	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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McGill University

Number of Reference Letters and Due Date: Minimum three, maximum five. Due by November 30.

Personal Letter Information and Due Date: Approximately 500 words, expressing goals, interests, and experience, due by November 30.

Strengths: Broad-based program with balanced exposure to all aspects of Dermatology. Large volume of patients. Teaching closely supervised by strongly dedicated staff. Subspecialty components: Skin Surgery, Contact Dermatitis, Pediatric Dermatology, Dermatopathology, Wound Healing, Phototherapy, Pigmented Lesions.

Other Key Features: Expect to work hard and be well-trained. Excellent program to be trained in, and a lovely city to live in.

Common Clinical Encounters: Skin tumours: benign and malignant. Acne and related conditions. Eczema and related conditions. Cutaneous infections. Complex medical problems with cutaneous manifestations.

Workload	Hospital/ Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	20	1/5
<i>Second third of program</i>	40	20	1/6.5
<i>Final third of program</i>	40	20	1/10

Research Expectations: Starting in R3 year; at least one project/year.

Areas to Improve Program: Have more budget for better equipment and clinic facilities. Recruit more academic staff.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Dermatology. Dermatology. Dermatology.
- ▶ **Other:** Be a well-rounded person. Be genuinely interested in Dermatology. Do an elective with us.

Université Laval

Strengths: Great variety of pathologies. Funded annual meeting for every resident. Good support for research.

Other Key Features: The size of our program is a strong point. Ten residents are part of our program and everyone knows every other individual pretty well.

Common Clinical Encounters: Eczema, psoriasis, skin cancers, connective tissue disease, benign tumors.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40–50	10	1 in 4/5
<i>Second third of program</i>	40–50	15	1 in 4/5
<i>Final third of program</i>	40–50	20	1 in 4/5

Research Expectations: Residents are expected to be involved in

at least one research project annually or a clinical case publication.

Areas to Improve: Number of clinical professors.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Dermatology (clinical experience preferably); not only one elective, not five or 10 as some do!!!

University of Alberta

Strengths: Excellent community experience. Support for research activities. Low faculty: resident ratio.

Other Key Features: Demonstration of high and consistent motivation in Dermatology. Persistent interest in mastering Clinical Medicine. Demonstrated expertise in publication and scholarship.

Common Clinical Encounters: Psoriasis vulgaris. Atopic Dermatitis. Non-melanoma skin cancer. Acne Vulgaris. Chronic Urticaria.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	35	1/4
<i>Second third of program</i>	36	35	1/4
<i>Final third of program</i>	30	35	1/5

Research Expectations: First year: none, second year: data collection, third year: publication.

Areas to Improve Program: Expand exposure to Contact Dermatitis expertise. Expand exposure to Photodermatology expertise.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Wide variety of Clinical Dermatology rotations with senior faculty. Rheumatology electives. Plastic Surgery electives.
- ▶ **Other:** All residents in the Dermatology program have a very strong bond of collegiality. The atmosphere is one of hard work, fun, and loyalty to one another. Residents are considered junior colleagues, and attending staff treat residents with the respect and confidence that they will do their best for patients.

University of British Columbia

Strengths: Committed teaching staff. Excellent research opportunities. Wide range of clinical training.

Other Key Features: Fellowships in many areas of medical and surgical dermatology.

Common Clinical Encounters: Skin cancers, hair disorders, immunodermatology, psoriasis, dermatologic and laser surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	15	15	1/4
<i>Second third of program</i>	15	15	1/4
<i>Final third of program</i>	15	15	1/4

Research Expectations: Incorporated with five years of training (case series, Pathology, Epidemiology).

Areas to Improve Program: Two resident positions per year. Greater access to community dermatology office rotation.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Dermatology. Family Medicine. Infectious diseases.
- › **Other:** The successful applicant will have high academic performance, be well-rounded, and have the ability to work independently and with others.

University of Ottawa

Strengths: The program gives you a solid clinical foundation. During the PGY 1&2 years there is exposure mainly to Internal Medicine and Pediatrics but also plastic surgery, rheumatology, infectious disease and vascular surgery. Only one candidate in 44 years has not passed Royal College exams.

During the core years (PGY 3-5) residents are exposed to a large variety of cases in General Dermatology Clinics along with sub-specialty exposure to Dermatopathology, Contact Dermatology, Leg Ulcers, Dysplastic Nevi, Dermatological Surgery including Mohs, Pediatric Dermatology and Laser. In addition there is a strong in-hospital consultation service and a extremely strong academic ½ day.

There is ample time and support for research including a research month in the third year. There is always the possibility of doing a research year.

Elective time is provided during the PGY 3-5 years that can be spent fostering special interests or solidifying general dermatology knowledge. We have a world renowned contact dermatitis clinic as well as a dedicated pigmented lesions clinic.

Other Key Features: Our residents are an easy-going friendly group that get along very well both in and outside of the hospital. Staff are approachable and have a very collegial relationship with residents. Work-life balance is valued.

Common Clinical Encounters: The cases consist of both commonly encountered conditions such as acne, atopic dermatitis, psoriasis, contact dermatitis as well as less common cases such as bullous pemphigoid, genodermatoses and connective tissue diseases.

Workload: Clinic (hrs/wk) Approx 28 hours
Reading (hrs/wk) Approx 8 hours or more
Academic ½ Day Time and Preparation,
Approx 10 hours

Call: First two years - you do call as per the rotation you are on as well as two weeks of Dermatology call per year. In third year - 6 weeks of call, in 4th year - 5 weeks of call and in 5th year - 4 weeks of call.

Research Expectations: During your senior Dermatology years, you must complete a quality assurance project which can be published but this is not a requirement. Also, you must prepare one paper for publication in residence, although most residents far exceed this minimum requirement. In addition you are expected to partake in a research project.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** It is great to do electives in Dermatology - 2 weeks per school is usually the allotted amount. Try to become involved in a project with one of the residents or staff during your elective.

University of Toronto

Strengths: Critical mass of residents. Excellent core teaching staff. Diversity and volume of clinical problems encountered. Specialty clinics, e.g., immunodermatology, medical dermatology, wound care, Mohs Surgery, etc.

Other Key Features: This is the only Dermatology residency program in Canada with dedicated PGY2 rotations in Medical Genetics, Tropical Medicine, and Occupational Medicine. A three-month rotation dedicated to Dermatological Surgery. Six months of training in Pediatric Dermatology at the Hospital for Sick Children. This is the largest Dermatology program in English Canada. There is a partnership between staff and residents that is constantly working to improve the residency program.

Important Clinical Encounters: This includes severe skin disease requiring complex medical therapy including autoimmune blistering diseases, collagen vascular diseases, severe psoriasis, and severe drug reactions including TEN. There is significant exposure to the diagnosis and management of skin cancer and skin ulcers.

Workload	Hospital/ Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50-55	5-10	5 weeks/year
<i>Second third of program</i>	40-45	5-7	5 weeks/year
<i>Final third of program</i>	40	15	5 weeks/year

Research Expectations: All residents are required to complete a three-month research rotation in the PGY4 year.

Areas to Improve Program: More full-time staff. There are currently five full-time staff and several part-time to half-time staff.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Dermatology. Internal Medicine. Infectious Diseases, Plastic Surgery, Rheumatology.
- › **Other:** A superior academic record demonstrating special proficiency in subjects related to the specialty. A proven interest in the specialty, demonstrated by electives in Dermatology and related fields. Excellent interpersonal skills.

Programs Not Responding

Université de Sherbrooke

Université de Montréal

DIAGNOSTIC RADIOLOGY

Description of Specialty

Diagnostic Radiology is a branch of medical practice concerned with the use of imaging techniques in the study, diagnosis, and treatment of disease. Radiologists interpret images produced by X-rays (radiography and computed tomography), radioisotopes (nuclear medicine), ultrasound (sonography), and magnetic fields (magnetic resonance imaging) in order to help clinicians decide the appropriate treatment for patients. Good interpretation skills require a broad base of knowledge of anatomy and disease processes, combined with technical expertise. Radiology encompasses many subspecialties. Presently there are Neuroradiologists; Ultrasound, MRI, and CT Specialists; Mammographers; GI Radiologists; etc. Interventional Radiology is an emerging field in which specially trained radiologists can perform minimally invasive procedures to treat medical problems that once required surgery. Examples include insertion of central lines, drainage of abscesses, angioplasty, and tissue biopsies.

Overview of Program

All programs in Radiology are five years in duration. The PGY1 year is a basic clinical training year that offers the resident exposure to a broad range of medical care. The PGY2-5 years are designed to complete the requirements set out by the Royal College of Physicians and Surgeons of Canada. Topics studied in the final years include GI Radiology, GU Radiology, Chest Radiology, Bone Radiology, Neuroradiology, Interventional Radiology, Nuclear Medicine, CT Scanning, MR Imaging, Ultrasound, Pediatric Radiology, and Mammography. Most schools have required research components in their PGY2-5 years or strongly encourage it.

Accreditation without certification

- › Neuroradiology
- › Pediatric Radiology

Fellowships offered without Royal College Status

Organ System Fellowships:

- › Abdominal imaging
- › Breast imaging
- › Cardiac imaging
- › Cardiothoracic imaging
- › Musculoskeletal imaging
- › Thoracic Imaging
- › Women's Imaging

Imaging Modality Fellowships:

- › Cross-sectional Imaging
- › MRI
- › PET/CT
- › Ultrasound

Others:

- › Interventional Radiology
- › Neurointerventional Radiology

**See http://www.car.ca/content.aspx?pg=res_corner&spg=about&lang=E&IID= for locations and durations of Postgraduate Fellowships in Radiology.

2010 Quota – Total Positions 82

	Quota	IMG Quota
<i>Dalhousie University</i>	4	–
<i>McGill University</i>	6	–
<i>McMaster University</i>	5	1
<i>Memorial University</i>	3	–
<i>Queen's University</i>	3	–
<i>Université de Montréal</i>	8	–
<i>Université de Sherbrooke</i>	5	–
<i>Université Laval</i>	7	–
<i>University of Alberta</i>	4	–
<i>University of British Columbia</i>	7	–
<i>University of Calgary</i>	6	–
<i>University of Manitoba</i>	4	–
<i>University of Ottawa/Université d'Ottawa</i>	4	2
<i>University of Saskatchewan</i>	4	–
<i>University of Toronto</i>	8	2
<i>University of Western Ontario</i>	4	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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McMaster University

Strengths: Collegial learning environment with great team atmosphere. Dedicated Program Director and training committee. Excellent faculty/resident ratio and low volume fellow program — excellent hands-on exposure.

Other Key Features: Comprehensive information regarding the program is available on our departmental Website. We have taken the time to try and include all information that would be relevant to interested medical students. We have an excellent group of residents and faculty who learn and teach well in a positive, collegial environment.

Common Clinical Encounters: Not a question generally applicable to Radiology.

Workload	Hospital/ Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40 hrs/wk	8–10 hrs/wk	1/6–1/7 —12 mos
<i>Second third of program</i>	40 hrs/wk	8–10 hrs/wk	1/6–1/7 —12 mos
<i>Final third of program</i>	40 hrs/wk	>12 hrs/wk (exam prep)	1/6—8 mos

Research Expectations: All residents are asked to complete and present one research program during their residency program. Most residents choose to do this during their PGY3 or 4 years.

Areas to Improve Program: Maintain active recruitment of Radiology faculty with subspecialty expertise. Recruit enthusiastic, academically strong residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Radiology, Internal Medicine or ER, Surgery.
- › **Other:** At least one Radiology elective to ensure that the candidate has a real sense of what the field and career are about. Do well on core rotations during clerkship and electives: Internal Medicine, Surgery, ER, Pediatrics. Performance on these rotations reflects the overall quality of the candidate. References should be from staff/faculty who have a very good sense of who you are, your work ethic, and your potential skills and strengths as a future resident.

Queen's University

Strengths: Strong teaching and hands-on experience.

Other Key Features: N/A

Common Clinical Encounters: Trauma. Cancer. Neurovascular disease. Orthopedic reconstruction. This is Radiology. We see everything.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	45	3	1/6
Second third of program	N/A	N/A	N/A
Final third of program	N/A	N/A	N/A

Research Expectations: One project in four years.

Areas to Improve Program: Improved government funding of research and academics. More time for teaching.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any clinical elective is useful.
- › **Other:** Successful candidates will have a strong background in Clinical Medicine. Interest in Radiology and demonstrated good work ethic.

University of Saskatchewan

Strengths: Small size with no fellows allows on hands experience for residents of all levels on all rotations. Pediatrics occurs during all rotations allowing good exposure.

Other Key Features: Small size allows staff to get to know residents well and help with areas of need.

Common Clinical Encounters: General radiology of all areas.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1:6
Second third of program	50	15	1:5 – 6
Final third of program	50	20	1:7 – 8

Research Expectations: 2 projects over residency

Areas to Improve Program: PET scanning to begin next year

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any radiology elective to become familiar with specialty.
- › **Other:** N/A

Université de Sherbrooke

Key Features: This program distinguishes itself on multiple levels: with a warm and dynamic group of fewer than 20 residents who are motivated to learn their future specialty, a program for which the residency spots are sought after and all filled, and a program with rising numbers of professors despite the current manpower shortage in Radiology in Quebec. The program boasts a 100% success rate by candidates on the Royal College exams for the past 15 consecutive years.

University of Toronto

Strengths: The teaching hospitals of the University of Toronto serve the largest and most diverse population in Canada as well as tertiary/quaternary health care for patients throughout the province of Ontario. Our residents benefit from a volume and variety of medical imaging pathology. They have the opportunity to train at all of our large and modern teaching hospitals, doing so in groups of 6 - 12 trainees of all levels, thus maintaining a close working environment with peers and faculty. Our faculty teachers are sub-specialty trained radiologists who are recognized experts in their field and work side by side with trainees. We have over 160 clinical faculty for teaching the 45-50 residents in the PGY2-5 training years.

All hospitals are equipped with state-of-the-art equipment. Residents work daily with the best of digital radiography, ultrasound, Nuclear medicine, CT and MRI technology. All hospitals have digital image archiving and communication systems. Library and study facilities with electronic medical resources at all sites and all workstations. The Resident Program works closely with our large University Fellowship Program. Our resources easily support both resident and fellow education, and our residents tell us the fellows greatly enrich the education of residents by their team work, mentorship and through their rich international backgrounds.

Other Key Features: Our 5 year program is structured to produce well trained radiologists. Residents are closely supervised and are given increasing levels of responsibility throughout the training program. Residents receive training in all subspecialties of radiology and upon completion of the program the resident will be well prepared for clinical and/or academic roles in diagnostic radiology. The program emphasizes knowledge, research, collaboration and communication and residents will develop consultative skills to assist in patient care management. Please see the program website for further information <http://medical-imaging.utoronto.ca/residenc.htm>.

Common Clinical Encounters: Radiology residents have frequent clinical encounters as they perform diagnostic tests and therapeutic procedures on their ultrasound rotation, interventional rotations and on many subspecialty rotations.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	Work on service 8 am to 5 pm daily (with 1 to 3 hours of rounds per day)	At least 2 hours per day, 5 days per week	Varies depending on site from 1 in 5 to 1 in 10 (average 1 in 7)
<i>Second third of program</i>	Work on service 8 am to 5 pm daily (with 1 to 3 hours of rounds per day)	At least 2 hours per day, 5 days per week	Varies depending on site from 1 in 5 to 1 in 10 (average 1 in 7)
<i>Final third of program</i>	Work on service 8 am to 5 pm daily (with 1 to 3 hours of rounds per day)	At least 2 hours per day, 5-7 days per week	Varies depending on site from 1 in 5 to 1 in 10 (average 1 in 7). PGY5 residents stop call in January

Research Expectations: Research is a required component and a strength of the University of Toronto program. Residents are required to complete a project which is to be presented at the Annual Research Day in the PGY4 year. Residents are also required to write up their project in manuscript format.

Residents have lectures on research methodology, epidemiology and manuscript preparation and participate in a research course beginning in the PGY3 year. In addition to clinical research opportunities in the hospitals, the University Department also has resources specifically for research including Imaging Research Laboratories and physicists and a Clinical Epidemiology Unit which provides the research curriculum and a computing resource area. Each resident is required to become involved in a research project, present at Research Day and submit a manuscript for publication (does not have to be accepted). Residents receive protected time to work on their projects. Publication or presentation (locally or at the National/International level) is encouraged (funding support).

Areas to Improve Program: The program continues to develop a comprehensive CanMEDS curriculum which is constantly being revised. We are in the process of increasing the exposure to community radiology experiences.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Electives are arranged through the electives office. Medical students interested in pursuing a career in Radiology are encouraged to spend time on-call with the residents as this type of call is not part of the usual medical school curriculum.

› **Other:** N/A

University of Western Ontario

Strengths: High staff radiologist-to-resident ratio. Very active imaging research institutions (Robarts Research Institute, Lawson Research Institute). Strong interest in teaching, despite significant clinical load at each of the three hospital training sites. Broad imaging exposure; modern equipment that is continuously being updated. All subspecialty rotations provided in London; no out-of-town mandatory rotations. City-wide PACS system (digital imaging archive).

Other Key Features: Bilingualism not required but an asset due to patient population.

Common Clinical Encounters: Trauma, active neurologic conditions, acute abdomen, vascular disease, miscellaneous other (question not directly applicable to Diagnostic Radiology).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40–50	~ 14	Averages 1 night per week, either 1st or 2nd call. Call is concentrated
<i>Second third of program</i>	40–50	~ 14	
<i>Final third of program</i>	40–50	~ 14	

Research Expectations: Two research projects are expected to be completed and presented at an annual Resident Research Day. One may be a minor project, i.e., a case report or small case series. The second should be more substantive, including some type of Clinical Radiology research, a practice audit, or possibly a basic science Radiology research project.

Areas to Improve Program: Increase the number of clinical teachers, which would allow us to increase the number of resident positions offered each year. PACS is now fully implemented.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** At least one elective in Radiology. Applicants must demonstrate a genuine interest in the specialty and have some understanding of what Radiology actually entails.
- › **Other:** Successful applicants will have demonstrated genuine interest in diagnostic imaging and academic scholarship. Demonstrated personal qualities are necessary to be an effective imaging consultant. This is a busier and more intensive residency than some trainees expect. Clinical case volume is high, and rapid learning is required from enthusiastic, motivated residents.

Programs Not Responding

[Dalhousie University](#)

[McGill University](#)

[Memorial University](#)

[Université de Montréal](#)

[Université Laval](#)

[University of Alberta](#)

University of British Columbia

University of Calgary

University of Manitoba

University of Ottawa

EMERGENCY MEDICINE

Description of Specialty

Emergency Medicine is the specialty devoted to the evaluation, resuscitation, and stabilization of patients presenting to community emergency departments. The Specialist Emergency Physician (Emergentologist) is responsible for recognizing and managing a broad spectrum of acute illness and injury. The approach to treatment in the emergency department can vary dramatically from case to case, for example, a pediatric versus a geriatric presentation of the same complaint. In implementing a treatment strategy for the various presentations, an Emergency Physician must quickly access skills acquired from almost every clinical specialty, within the confines of a fast-paced, high-pressured environment. The Emergentologist's attitude must convey adaptability, emotional strength, and a keen desire for the challenge of managing patients in time-restricted circumstances while demonstrating clinical and technical adroitness.

Overview of Program

Training in Emergency Medicine can be pursued via two routes. The first route, which is the focus of this chapter, is a five-year program under the aegis of the Royal College of Physicians and Surgeons of Canada (RCPSC-EM). This route is especially suited for those wishing to become specialists in Emergency Medicine, and graduates of this route typically secure employment with consultant-level demands in large tertiary care hospitals with substantial academic and administrative involvement. The second route is via the College of Family Physicians of Canada (CFPC-EM), which involves a year of training in a CFPC-accredited program in Family Medicine/Emergency, after attaining certification in a two-year Family Medicine program.

The RCPSC-EM training involves a year of basic clinical training, and forthcoming years to include a mandatory year of training in the emergency aspects of Anesthesia, Critical Care (including CCU), General Surgery, Internal Medicine, Neurosciences, Orthopedic Surgery, Pediatrics, and Psychiatry (including crisis intervention); a minimum of six months as a senior resident in the emergency department; and specific training in the prehospital and administrative aspects of Emergency Medicine. One year of the program allows flexibility, which may include research; elective assignments in ENT, Obstetrics and Gynecology, Ophthalmology, Plastic Surgery, Radiology, Trauma Service and/or Toxicology; or further training in Emergency Medicine and other appropriate clinical subspecialty areas.

Fellowships offered without Royal College Status

- ▶ Academic/Research
- ▶ Pre-hospital Care and Transport Medicine
- ▶ Trauma

** See <http://www.caep.ca/> for locations and durations of Postgraduate Fellowships in Emergency Medicine

2010 Quota – Total Positions 58

	Quota	IMG Quota
Dalhousie University	1	–
McGill University	4	–
McMaster University	5	1
Memorial University	–	–
Queen's University	4	–
Université de Montréal	4	–
Université de Sherbrooke	–	–
Université Laval	4	–
University of Alberta	6	–
University of British Columbia	4	–
University of Calgary	4	–
University of Manitoba	4	–
University of Ottawa/Université d'Ottawa	8	2
University of Saskatchewan	–	–
University of Toronto	7	3
University of Western Ontario	3	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Strong commitment to medical education.

Internationally recognized pre-hospital program. Full-time research director in house. Evidence-based medicine course.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40–50	15	35
Second third of program	40–50	15	35
Final third of program	36	18–24	–

Varies considerably between rotation types throughout all years. Hours in clinic decrease with seniority.

Research Expectations: Complete at least one research project under staff supervision. Protected time for research is distributed throughout the five years with opportunities for more concentrated experiences if desired.

Areas to Improve Program: Further increase our trainees' research opportunities/output. Currently reconsolidating core teaching and looking for ways to more effectively use medical simulation (e.g., resuscitation) in some of our core sessions.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Anesthesiology or Intensive Care. Surgical specialties such as Plastics/Orthopedics. Emergency Medicine.
- ▶ **Other:** Develop an interest and understanding of current issues in pre-hospital and Emergency Medicine. Demonstrate some interest and aptitude for research or education. Maintain a balance between solid clinical ability and a healthy constructive lifestyle.

McGill University

Strengths: Dedicated teaching staff in the ED rounds and exam prep. Simulation Center. Protected academic half day. Program flexibility (can either focus on an “area of interest” or do the 1st year of a subspecialty/fellowship). Large volume of patients across three adult ED and one pediatric ED. Early focus on

EBM/clinical appraisal of literature. Ability to travel to the USA to do trauma and toxicology.

Workload	Hospital/Clinic Work (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40+	8	Rotation dependent
Second third of program	40+	8	Rotation dependent
Final third of program	40+	8	Most rotations at this point don't have “call”

Research Expectations: All residents are required to do a small research project and bring it to the point of either a poster presentation, abstract or publication.

Areas to Improve: We are currently working on graded responsibility for the emergency residents. Emergency overcrowding.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Have a backup plan (in case you don't match)! Do an emergency elective outside of your university. Have a letter of reference from a RFCPC Emergency MD. Participate actively in your Emergency Medicine Interest Group. Do electives in emergency-related areas (which may be part of your back up plan; i.e., ICU/anesthesia/trauma).

Queen's University

Strengths: Three residents per year—very strong tradition in Emergency Medicine. Excellent academically focused faculty. Kingston is a great city to live in as a resident.

Other Key Features: Solid reputation, excellent resident morale, and large number of residents, great departmental support for residency program, experienced faculty with subspecialty expertise in critical care, toxicology, ED ultrasound, Medical Education, Research, EMS. Kingston is a great place to live and our residents graduate happy and intact with great career options.

Common Clinical Encounters: Breadth of primary and emergency care.

Workload: First third of program: At least 17 eight-hour shifts per month.

Research Expectations: One significant research or other academic project during the residency. Elective time for research is provided.

Areas to Improve Program: Patient simulator purchase by

Summary of Family Medicine Sites by University

University	Site Offered
Dalhousie University	Halifax, Fredericton, Moncton, Saint John, Sydney, Prince Edward Island
McGill University	Montréal, Gatineau
McMaster University	Hamilton, Kitchener-Waterloo, Fergus, Grimsby, Collingwood, Mount Forest, Brampton, Niagara
Memorial University	Rural
NOSM	Sudbury, Thunder Bay, North Bay, Sault Ste. Marie, Timmins
Queen's University	Kingston
Université de Montréal	Montréal, Maria, Amos-LaSarre, Trois-Rivières, Shawinigan, Mont-Laurier
Université de Sherbrooke	Estrie, Lemoine, Moncton, Saguenay, Richelieu-Yamaska, Rouyn-Noranda
Université Laval	Étchemin, Québec, Rimouski, Gaspé, Baie-Comeau, Les-Basques, Joliette
University of Alberta	Edmonton, Red Deer, Northern Alberta Experience
University of British Columbia	Greater Vancouver, St. Pauls, Aboriginal, Okanagan Rural, Victoria, Chilliwack, Prince George, Rural Prince George, Nanaimo, Northwest
University of Calgary	Calgary, Rural
University of Manitoba	Urban, Rural, Northern-remote
University of Ottawa	Ottawa
University of Saskatchewan	Saskatoon, Regina, Rural
University of Toronto	Greater Toronto Area, Rural, Barrie-Newmarket
University of Western Ontario	London, London Regional, Windsor, Rural Hanover, Rural Goderich

university. Mandatory U.S. electives in trauma and toxicology funded by outside source.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Emergency Medicine. Rural Family Medicine.

› **Other:** Undergraduate electives in Emergency Medicine. Undergraduate research in Emergency Medicine. A well-rounded individual.

Université Laval

Strengths: A thorough integration of the CanMEDS competencies aimed at providing the resident with the necessary tools to become a complete Emergency Medicine specialist, with strong human values. Staff involvement and openness. Diversified teaching milieus with a wide variety of patient pathologies. Young program that is evolving according to residents' and program committee's input.

Other Key Features: Wide variety of different teaching hospitals with many different approaches to problems. Innovative rotations including environmental medicine, EMS, emergency department management and clinical teaching. Supportive program with regards to research or electives. Local hospital with pediatric ICU and emergency department with over 20,000 pediatric patient visits per year. Possibility of doing overseas and international electives. High retention of graduates who get involved in the program. A program committee that is receptive and values resident input.

Common Clinical Encounters: Trauma patients (motor vehicle

accidents), patients with multiple programs, intoxicated patients (provincial poison control centre is in Quebec City). Febrile children. Decompensated COPD patients.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	35	10	1:4–1:5
Second third of program	35	12	1:4–1:5
Final third of program	32	20	1:5

Research Expectations: The basic requirement is that a resident completes 7 credits pertaining to research and produces a research project during their residency; however, everything is setup to allow the residents to achieve a Master's level. Residents in our program have dedicated time for research (mostly during years 3 to 5) where their clinical burden is lessened and time can be spent expanding an area of interest outside clinical medicine. Residents have taken this opportunity in the past to begin and occasionally complete Master's programs in clinical epidemiology or education or a MBA in health care management.

Areas to Improve: Better tailor the PGY1 year to meet specific needs. To define and determine more precisely the objectives that residents must attain during each year of residency.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Emergency Medicine elective in one of our facilities. Emergency Medicine elective outside our program. Trauma, environmental or toxicology electives. Show an interest in Emergency Medicine. Be well rounded in aspects outside of clinical medicine. Be willing to get involved in promoting the specialty of Emergency Medicine.

University of Manitoba

Strengths: Dedicated teachers. Excellent clinical pathology and opportunity to learn. New Emergency Department at the major teaching hospital (Health Sciences Center: Adult and Pediatric). Regional Emergency Department Information Collegial resident group. Full academic day. Integration of simulation and will be regionalultrasound into academic day at Health Sciences Center and will be regional.

Other Key Features: New clinical simulation center at University of Manitoba. New Research Coordinator.

Common Clinical Encounters: Trauma. Inner City Problems. Complex Medical Problems. Substance abuse and toxicology.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	36	8	1:4 when off service
Second third of program	36	8	1:4 when off service
Final third of program	32	8	1:4 when off service

Research Expectations: “Scholarly activity” — as per the Royal College Specialty Training requirements.

Areas to Improve: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Emergency electives are useful. Critical Care and Trauma electives. While not necessary to do an elective at the University of Manitoba, it is helpful to do so.
- › **Other:** Demonstration of interest in Emergency Medicine through electives and observerships is very helpful.

Université de Montréal

Strengths: Exhaustive exposition to the entire spectrum of clinical situations through University of Montréal network including a trauma 1 center (Sacré-Coeur), the 1000 beds, 3 sites, University of Montréal hospital, a tertiary pediatric center (Ste-Justine) and many more. Dedicated, energetic, highly qualified teachers constantly looking to improve themselves.

Other Key Features: All rotations focus on the emergency side of that specialty (ex: anesthesiology rotation centered on airway and vascular access). Opportunity to complete a master during residency. One trauma rotation outside Québec, one outside Canada. Convivial atmosphere. Living in a bustling, cosmopolitan French city.

Common Clinical Encounters: Inner city population, trauma, overdoses. Emergencies from all levels of care : simple lacerations to graft patient in shock.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	6	1:5
Second third of program	50	6	1:5
Final third of program	35	++ (exam year)	few, rotation dependant

Research Expectations: Every resident must complete a scholar project : small research project, systematic review, a pedagogy or quality improvement project that could be submitted for publication or presentation.

Areas to Improve: Developing our simulation program. Improving the medical administration rotation.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** “related” electives are usefull : ortho, intensive care, etc. Show you're not just there for the “adrenalin” part of the job. Emergency medicine is so much more than that. Think of what kind of life you want (schedules, etc...)
- › **Other:** We're always looking for the leaders of tomorrow, people who'd love to be involved in research, teaching or administration.

University of Ottawa

Number of Reference Letters and Due Date: Three due as per CaRMS.

Personal Letter Information and Due Date: Personal letter mandatory; due date as per CaRMS.

Strengths: Three primary teaching sites include 2 of the future leaders in EM; the educators --the Dept. of Emergency Medicine boasts award-winning teachers;Ottawa General Hospital, Civic Hospital and the researchers --worldwide acclaim of excellence in Children's Hospital of Eastern Ontario (CHEO). Our relationship with CHEO facilitates rotations in the emergency department, anaesthesia and pediatric critical care. All three emergency departments are large and busy with high acuity patients; furthermore, they have all been recently renovated. Our faculty includes people with a huge range of expertise and our research team under the leadership of Dr. Ian Stiell is world renown. Our residents have a rigorous schedule of teaching sessions that includes weekly departmental grand rounds and academic teaching sessions, simulation based training, and monthly journal club. Finally, our residents are a dynamic, motivated group of people who are a great strength of the program.

Other Key Features: Our program is one of the most sought-after residencies in Canada. This is not only because of the overall expanded interest in Emergency Medicine as a career choice but also reflects the excellence in education and research demonstrated by our residents, graduates, and attending staff. Ottawa is a leader in Emergency Medicine research and education is known worldwide.

Common Clinical Encounters: Between our 2 large adult hospitals and pediatric hospital, residents are exposed to the full spectrum of medical and surgical emergencies.

Workload: Residents in this program have a declining number and length of Emergency shifts per month, beginning with up to 18 10-hour shifts/month as a PGY1 and 14 seven-to-nine-hour shifts as a PGY5. Prior to their exams, residents complete only eight shifts/month and do not do night shifts.

Research Expectations: All residents are expected to complete an academic project during their training. This may be educational or research in nature. Shift number reductions are available as protected time can be applied toward research at the discretion of the resident to complete this scholarly project.

Areas to Improve Program: More residency spots for CaRMS residents. Presently have two each year. Development of local rotations, e.g., Toxicology, not yet available.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Emergency Medicine. Pediatric Emergency Medicine. Anything else!
- ▶ **Other:** Electives in Emergency Medicine. Excellent letters of reference. Leadership experience.

University of Toronto

Strengths: Extreme variety of clinical medicine and faculty expertise. Forward-thinking and innovative education committee. Resources for training (including simulation) and pre-hospital care.

Other Key Features: Twelve-month block to pursue a specific clinical area of the resident's choice (including a Master's degree if desired). Best teaching sites used for each rotation throughout the city and insistence on emergency-specific experiences for the residents in all rotations.

Common Clinical Encounters: Dedicated cardiac, trauma, and stroke centers. Acute cardiac events. Acute respiratory compromise. Infectious disease. Toxicology/substance abuse.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call (hrs/mo.)
<i>First third of program</i>	40	8	16
<i>Second third of program</i>	36	8	16
<i>Final third of program</i>	28	16	6

Research Expectations: One half day per week for the first four years is for academic pursuits. Master's degree opportunity available.

Areas to Improve Program: Improve the overcrowding situation in emergency departments. Continue to increase the use of simulation.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Emergency Medicine. Trauma or Critical Care. Anything else with rationale.
- ▶ **Other:** Understand what it is about and why you want to do it. Have a vision for your career and personal development. Have a good amount of insight into your personal strengths and weaknesses.

University of Western Ontario

Strengths: Faculty dedication. Strong didactic teaching program. Satisfied residents.

Other Key Features: Wonder why so many people who train in London stay in London? Come check us out! You'll be glad you did!

Common Clinical Encounters: Acute medical problems. Acute surgical problems. Trauma. Pediatrics. Acute care psychiatry.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50	5-10	Variable
<i>Second third of program</i>	45	5-10	Variable
<i>Final third of program</i>	35-40	10-20	Not much

Research Expectations: Resident research is a longitudinal experience throughout the first four years of the program.

Areas to Improve Program: More positions. Hire a dedicated researcher.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Emergency Medicine at our centre. Emergency Medicine at other centres with EM residencies. Other Emergency Medicine.
- › **Other:** Electives. Good reference letters. Demonstrated interest in academic emergency medicine.

Programs Not Responding

McMaster University

University of Alberta

University of British Columbia

University of Calgary

FAMILY MEDICINE

Description of Specialty

“The doctor who actually knows and remembers the patient and her family is essential. Researcher, or not, the family doctor selects, co-ordinates, and above all explains the specific expertise that will help to diagnose or treat a patient. And with the long-established features of continuity and context, only family medicine can provide the holistic care that an increasingly skeptical public now demands.” (Dr. Jacalyn Duffin, *History of Medicine: A Scandalously Short Introduction*, 2000, pp. 355–6.)

The College of Family Physicians of Canada (CFPC) is the voice of Family Medicine in Canada. Representing 16,500 members across the country, it is the professional organization responsible for establishing standards for the training, certification, and lifelong education of Family Physicians and for advocating on behalf of Family Medicine, Family Physicians, and their patients. The CFPC accredits postgraduate Family Medicine training in Canada's 17 medical schools.

According to the CFPC, the standards of accreditation of training programs in Family Medicine are based on the effective teaching of the following four principles of Family Medicine:

1. The Family Physician as a skilled clinician.
2. Family Medicine is a community-based discipline.
3. The Family Physician is a resource to a defined practice population.
4. The patient–physician relationship is central to the role of the Family Physician.

A Decima Research poll released in October 2003 confirms that most Canadians identify their family doctor as the most important person to the health care of themselves and their families. The poll, commissioned by the CFPC, surveyed more than 2,000 Canadians and revealed that when they consider all aspects of their health care, 66% of Canadians see their family doctor as the most important person.

Family Physicians are presented with a wide array of clinical scenarios. As such, the art of Family Medicine deals with providing comprehensive and cost-effective therapy to patients at the primary care level. The family doctor needs to be able to

integrate knowledge from human biology and pathophysiology, clinical ethics, clinical experience, context of care, patients' perspectives, and research evidence.

Many of the Family Medicine programs have learning opportunities at multiple sites. Refer to the CaRMS website, <http://www.carms.ca>, for an up-to-date listing.

Overview of Program

The core urban Family Medicine program provides two years of training in Family Medicine delivered in an urban setting. Most of the core Family Medicine programs strongly encourage training in rural settings. (Rural Family Medicine is considered separately in this Guide.) All programs in Family Medicine are two years in duration, with an optional third year of subspecialty training (see below). In general, the PGY1 year is a Basic Clinical Training year that offers exposure to Family Medicine, General Surgery, Internal Medicine, Pediatrics, Psychiatry, OB/GYN, and Emergency Medicine. The PGY2 year is designed to complete the requirements set out by the CFPC.

Family Medicine is a quickly evolving field. According to a survey published in *Canadian Family Physician* (2002), the number of residents completing an enhanced third year of training increased two-fold from years 2000–2002. As of August 2010, the following third-year programs were offered by their respective medical schools.

Accredited by Royal College:

- › Palliative Care 3–12 months

CFPC Certificate

- › Emergency Medicine (1 year)

Fellowships offered without Royal College Status

- › Academic (1 year full time, 6 years part time)
- › Addictions (1 year)
- › AIDS/HIV (6–12 months)
- › Anesthesia (1 year)
- › Breast Diseases (1 year)
- › Care of the Elderly (1 year)
- › Family Medicine Resident Research Fellowship (2 years)
- › Global Health
- › Indigenous Health
- › Inpatient Care — Family Medicine Advanced Skills (1 year)
- › Low Risk Obstetrics (3 months)
- › Medical Oncology
- › Psychotherapies (1 year)
- › Sports Medicine (1 year)
- › Women's Health/Obstetrics (1 year)

** See <http://www.cfpc.ca/English/cfpc/education/section%20of%20residents/resource/sor3-rdyear/default.asp?s=1> for locations and durations of Postgraduate Fellowships in Family Medicine.

2010 Quota – Total Positions 1,086*

	Quota	IMG Quota
Dalhousie University	39	6
McGill University	86	–
McMaster University	62	12
Memorial University	23	4
Northern Ontario School of Medicine	34	2
Queen's University	43	11
Université de Montréal	123	–
Université de Sherbrooke	92	–
Université Laval	99	–
University of Alberta	60	–
University of British Columbia	96	12
University of Calgary	48	–
University of Manitoba	43	–
University of Ottawa/Université d'Ottawa	42	13
University of Saskatchewan	33	1
University of Toronto	114	24
University of Western Ontario	49	19

* Does not include MOTP positions.

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Busy regional hospital with exceptional exposure to learning opportunities without competition from other learners. Preceptor model. Resident-centred faculty, and staff and program leadership.

Other Key Features: Resident-centred program. Dynamic, growing, bilingual city. Many hospital amenities including site gym, daycare, free French lessons, free parking.

Common Clinical Encounters: Community-based family practice setting with excellent opportunity for continuity. Busy emergency room with teaching by CCFP–Emergency Physicians. Excellent exposure to primary care and specialty obstetrics. Opportunity for 16 weeks of Maritime Rural Family Medicine.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	35–40	5–6	1 in 4
Second third of program	35–40	5–6	1 in 4
Final third of program	35–40	5–6	1 in 4

Research Expectations: Research project over 18 months.

Areas to Improve Program: Growth in research capacity in progress. Recruitment and faculty development of new preceptors.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Family Practice. Emergency. Obstetrics and Gynecology.
- ▶ **Other:** Commitment to Family Medicine. Commitment to “people-centred” elective and personal experience. Clear

understanding of Patient-Centred Clinical Method.

McGill University

Strengths: Rich academic environment. Flexibility within the program: Three electives in two years, opportunity to do more extensive rural time beyond the mandatory eight weeks, multiple rural sites to choose from. Strong perinatology program, which includes NRP/ALSO. Emphasis on ER exposure and acute care skills. High volume of patients to learn from and great variety of pathologies. Community and/or tertiary care hospitals (you choose!). Continuity of half days back to your practice, for which you are the primary physician. Dedicated core teaching time (one half day per week). Emphasis on evidence-based teaching. Rotation in palliative care. Access to McGill third-year programs (ER, Palliative Care, Health Care of the Elderly, Maternal and Child Health, Sports Medicine). Multicultural context of practice. Opportunity to practice/enhance your use of the beautiful French language! Montréal is a fantastic city; Gatineau (a regional unit) is in the beautiful Outaouais region. Large enough resident cohorts to allow for lots of socializing and support networks!

Other Key Features: We believe that McGill offers excellent training in the discipline of Family Medicine and prepares residents for future practices that can be widely diverse and polyvalent (urban versus rural, community versus academic, family practice obstetrics, in-hospital care, and emergency and acute care skills). All of this takes place in the beautiful province of Quebec and the fascinating city of Montréal, with the added bonus of being able to brush up on your French language skills!

Common Clinical Encounters: Residents are exposed to the full spectrum of Family Practice, both in an urban and rural setting, as well as in Family Medicine Units and Community Health Clinics. Patients are cared for in the office setting, emergency room, hospital inpatient, and at home. Patients of all ages are cared for, and residents have a small obstetrical practice where they follow women prenatally and deliver their babies. Residents learn to look after their patients’ mental health problems.

Workload: N/A

Research Expectations: A resident research project is not obligatory but encouraged, and support is available. All residents participate in a quality assurance project.

Areas to Improve Program: We continue to find innovative teaching methods for our core teaching program (small group seminars, interactive methods). Ensure that all residents have the right “mix” of patients, particularly pediatric patients, in their practice.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** We do not require that specific electives be done. Rather, we encourage students to do any clinical electives of interest to them and relevant to the discipline of Family Medicine, of which there are many! Some examples include Dermatology, Sports Medicine, Adolescent Medicine, Rheumatology, Cardiology, Radiology, Neurology, Emergency Medicine, Rural Family Medicine, etc. We do not require that an elective be done in Family Medicine.
- ▶ **Other:** Strong academic record. Excellent communication skills and teamwork. Passion for Family Medicine in all its facets.

McMaster University

Strengths: Flexible training to meet the individual needs of each resident, and a variety of training sites including community based practices with a 1:1 preceptor-to-student ratio, teaching units allowing for a highly inter-professional learning experience, rural experiences allowing most of the training to be done in a rural setting and our own Maternity Centre. Our training sites are located in urban and suburban communities as well as specialty sites such as rural and aboriginal locations. We have award-winning, knowledgeable and enthusiastic faculty.

Other Key Features: We offer longitudinal behavioural science (replacing the traditional Psychiatry rotation), evidence-based medicine, quality assurance and practice-based, small-group learning programs. We also offer a good deal of choice in the second year, with three months of electives/selectives. Once residents have entered their second year, they, too, will have opportunities to teach medical students if they choose.

Common Clinical Encounters: Maternal/newborn care, care of children and adolescents, care of adults, care of the elderly, chronic disease prevention and management, long-term care, palliative and end of life care, a variety of procedural skills as well as a variety of practice settings including house calls, office visits, in-hospital care, out-patient care, emergency room and long-term care facilities.

Workload: McMaster is able to offer a variety of scheduling options. We offer full block rotations, partially integrated rotations and fully integrated rotations across our sites. The partially integrated curriculum is Family Medicine focused with teaching geared toward continuity of primary care. The goal is to provide experiences with an increased Family Medicine relevance to ensure that residents feel confident that they are practice-ready at the completion of two years. We adhere strictly to the PAIRO contract in terms of work hours and on call.

Research Expectations: The residents are required to complete a quality assurance project related to an area of interest in their Family Medicine block. The requirement is for one project during the two-year residency. Residents will be supported by a QA tutor and present their findings in both oral and poster presentations. The site winners will then present at our annual year-end celebration called Research Day.

Areas to Improve Program: Continue to build and expand site offerings including rural and community-based experiences in surrounding communities.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** The breadth of Family Medicine would suggest that students should pursue whatever they are truly interested in!
- › **Other:** Have a genuine desire to develop the skills necessary to provide comprehensive primary care service to a population of patients and their communities. Work in a variety of different primary care settings. Understand the centrality of the doctor-patient relationship and the importance of competent longitudinal, coordinated, and compassionate care.

Memorial University of Newfoundland

Refer to Rural – CARMS website

Queen's University

Strengths: Our curriculum is based on the CFPC “Triple C” Curriculum model (Comprehensive learning, Continuity of patient care, supervision and curriculum and Family Medicine Centred education) which helps prepare you to practice Family Medicine anywhere. Our flexible program combines core Family Medicine placements with training in related specialties and also gives you time for electives.

Other Key Features: We have four different training sites (Kingston & 1000 Islands, Belleville-Quinte, Peterborough-Kawartha, Bowmanville-Oshawa-Lakeridge). Each site covers the same program objectives and utilizes their own unique community resources to deliver to the curricula. Visit www.dfmqueens.ca for more information! We also offer a robust program in Global Health, an annual wilderness retreat, international elective opportunities, opportunities to teach and do research and placements in a remote community hospital in Northern Ontario. Additionally, we have many PGY3 program options: Emergency Medicine, Anesthesia, Women's Health, Aboriginal Health, Global Health, Care of the Elderly, Developmental Disabilities, Palliative Care.

Common Clinical Encounters: Community-based Family Medicine is at the core of your 2 year training program. You will also have exposure to other primary care activities (Long Term Care, chronic disease management, surgical procedures, obstetrics, emergency medicine, etc.) at various points during your training.

Workload: Variable depending on site and rotation.

Research Expectations: Over your two years, you will complete a research project, culminating in either a poster or oral presentation at our annual Research Day. During your first year, you will also complete a clinical practice audit.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Demonstrated interest in Family Medicine/Primary Care. We recommend having completed an elective in Family Medicine.
- › **Other:** If you and your partner both match to our program, we will strive to ensure that you have complimentary schedules.

University of Alberta

Strengths: Strong resident participation in evaluation and development rotations and learning. Education a priority (over service) and flexibility. Specific to military, faculty with military experience to assist/facilitate in military rotations or training (if desired), such as attending the Diving Medicine Course or rotations on a military base.

Other Key Features: Regarding the U of A Family Medicine Residency Program for military candidates, we have faculty with experience in the military. We can help facilitate electives or additional military training, as well as advise the resident on some aspects of medical practice in the Canadian Forces.

Common Clinical Encounters: This varies dramatically with rotation (e.g., Obstetric rotation will have very different clinical scenarios compared to care of the elderly). Within Family Medicine, it will also vary with the preceptors' type of practice.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	1–8	Generally 1/4
<i>Second third of program</i>	40	1–8	Generally 1/4
<i>Final third of program</i>	40	1–8	Generally 1/4

Research Expectations: Strong resident participation in evaluation and development rotations and learning. Education a priority (over service) and flexibility. Specific to military, faculty with military experience to assist/facilitate in military rotations or training (if desired), such as attending the Diving Medicine Course or rotations on a military base.

Areas to Improve Program: Increase academic half days from two to four per month (in the process of doing so). Provide more funding for resident CME (such as attending conferences)—a problem throughout all universities.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Family Medicine, Emergency Medicine, other Family Medicine-related fields (e.g., Internal Medicine, Pediatrics, etc.).
- › **Other:** Patient interaction and interpersonal skills. Experience in Family Medicine (particularly rural) and related fields. Academic/clinical ability.

University of Calgary

Strengths: Flexibility and customizability. Four blocks of elective time, as well as horizontal electives. Responsiveness to needs of the residents. The program will listen and attempt to change elements of the program as resident needs arise.

Other Key Features: Our core precepting sites provide a panoply of choices of practice styles from inner city clinics to urgent care to traditional family medicine to rural medicine to aesthetic medicine. The core rotations provide the resident with a firm grounding in the various areas of medicine that a Family Physician is likely to encounter. For specific program information, please see our program description on the CaRMS Website.

Our clinics function within Primary Care networks which, along with regional resources, provide on site multidisciplinary teams. Members of the team include chronic disease nurses, dietitians, asthma educators, shared mental health with psychiatrists and therapists, social workers and an innovative primary care therapist.

We are continually upgrading our learning environment to provide the best experience and teaching possible. Our third-year options are varied and we are working on a third-year Global Health option.

Common Clinical Encounters: Depression. Hypertension. Diabetes. Chronic disease management (e.g., COPD, CAD, CHF, etc.). Social problems (placement issues, financial issues, relationship problems, etc.).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	45	3	1/4
<i>Second third of program</i>	45	3	1/4
<i>Final third of program</i>	45	3	1/7

Research Expectations: A resident is expected to do a research project or scholarly activity that will be presented in March of the second year at our Annual Resident Research day. The resident is encouraged to work on this project through the entire two years of residency.

Areas to Improve Program: We are currently modifying our Pediatrics rotation to better accommodate the needs of Family Medicine residents. We are currently implementing a standardized, rotating two-year academic curriculum in which set topics will be reviewed over any given two-year cycle.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Choose electives and experiences relating to the many components of Family Medicine.
- › **Other:** Demonstrate an interest in Family Medicine. Have some elective experience in Family Medicine. Demonstrate good interpersonal skills.

University of Ottawa

Strengths: The Family Medicine residency program at the University of Ottawa offers the possibility of training in very diverse settings, including traditional Family Medicine Teaching Units, community practices in urban, suburban and rural settings, and offers learning opportunities in both official languages.

Other Key Features: A number of the Family Medicine Teaching Units (and several community practices) have been approved as Academic Family Health Teams; this will allow residents the opportunity to practice within an interprofessional collaborative care model.

Common Clinical Encounters: Residents have the opportunity to experience the full spectrum of the practice of Family Medicine, including ambulatory care, hospital inpatient care, emergency medicine and maternal health care. In the office setting, residents are exposed to the common problems encountered in Family Medicine (hypertension, diabetes, cardiac disease, mental health problems, well child care, women's health) and learn by means of structured direct supervision and case discussion.

Workload: Residents participate in the clinical activities and on-call duties of the rotations they are assigned to. Responsibilities are appropriate to their level of training and supervision is available at all times. We respect and adhere to PAIRO guidelines with respect to workload.

Research Expectations: Residents are provided structured instruction in critical appraisal of the scientific literature and Evidence-Based Medicine; they are expected to complete critical appraisal tasks based on the College of Family Physicians of

Canada's Pearls for Resident program. Every resident is expected to complete a Resident project as part of the requirements of the residency; over the two years of the program, they will develop a research question, review the existing literature and carry out an evaluative intervention; residents will present their project in the final months of their residency.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** We value self-directed learning and we recognize the important contribution of all elective opportunities in Family Medicine. As such, the department of Family Medicine does not accord increased value to one elective experience over another.

University of Toronto

Strengths: Flexibility to choose site, electives, and third-year options. Varied populations served through different teaching centres, e.g., inner city, suburban, obstetrical, and geriatric. Rural teaching experiences.

Other Key Features: Options for horizontal training — develop a practice of your own quickly and effectively. Options for part-time training — permits you to pursue other interests and manage a young family. Flexible third-year programs that can be tailored to your interests.

Common Clinical Encounters: Common problems in Family Medicine — acute and chronic, minor and serious. Multi-problem medical, e.g., DM, BP, heart disease. Psychosocial problems in individuals and families. Preventive health care and well-person counseling for all ages. Women's health issues.

Workload: First third of program: Varies from site to site and follows PAIRO guidelines/resident-determined/1/4 or less. Second third of program: 1/4 or less. Final third of program: 1/6 to 1/12.

Research Expectations: PGY2 research or academic project is required — usually a small project with supervision and support. Project may be done by a small group of two to three residents.

Areas to Improve Program: Greater consistency of clinical experiences across sites. Larger number of third-year funded positions.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Urban or Rural Family Medicine. Emergency Medicine. Area of interest relevant to Family Medicine (within Internal Medicine, Surgery, Pediatrics, Psychiatry, OB/GYN, etc.).
- › **Other:** Gain understanding of broad scope of Family Medicine. Do one elective in Family Medicine. Obtain a strong reference from a Family Physician, either community-based or academic.

University of Western Ontario London Site

Strengths: Comprehensive training in supportive settings. Flexibility in meeting your own learning objectives. Strong academic seminar and mental health teaching programs.

Other Key Features: One of the most flexible programs in the country. One of our residents recently won the prestigious Murray Stalker Award from the CFPC. We have a very enthusiastic and strong residents' organization.

Common Clinical Encounters: Well-baby care and common pediatric conditions. Prenatal, intrapartum, and post-partum urgent and emergent conditions in Family Medicine. Adult medicine and geriatric conditions; office, hospital, and house calls. Palliative care.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	You decide	1:4–1:5
<i>Second third of program</i>	40	You decide	1:4–1:5
<i>Final third of program</i>	40	You decide	1:4–1:5

Research Expectations: A resident project is required. It does not have to be research. If you choose to do research, there are lots of resources to help you. Master's level: Master's of Clinical Science in Family Medicine in our Graduate Studies program requires a thesis or research project or major essay in Family Medicine.

Areas to Improve Program: Look for core and elective rotations with fewer learners present.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Family Medicine, Internal Medicine, Pediatrics, Obstetrics, or Psychiatry.
- › **Other:** Be patient-centred, be a good communicator, be committed to learning and making the most of your training.

Programs Not Responding

Université de Montréal

Université de Sherbrooke

Université Laval

University of British Columbia

University of Manitoba

University of Saskatchewan

RURAL FAMILY MEDICINE

Description of Specialty

Rural Family Medicine offers the unique opportunity to practise in small, generally more northern and remote communities. Nowhere else is the all-encompassing nature of family practice more evident. Without the immediate accessibility of sophisticated diagnostic tests and distant specialist backup, rural doctors are trained to develop a higher level of clinical responsibility and broader range of skills. There is great versatility in the field, with opportunities to work in Obstetrics, Emergency Medicine, inpatient care, palliative care, surgical assistance, and home visits.

Most Rural Family Medicine programs are offered at more than one site at a particular university. For an up-to-date listing, refer to the CaRMS Website (<http://www.carms.ca>).

Overview of Program

The residency program for Rural Family Medicine is two years in duration, with an optional third year to sub-specialize in areas such as Anesthesiology, Aboriginal Health, Emergency Medicine, Behavioural Medicine, Sports Medicine, ICU/CCU, or Geriatrics. In general, the PGY1 year is a basic clinical training year, while PGY2 is designed to complete the CFPC requirements. Residents training are generally one-on-one, with many hands-on opportunities in various different communities.

Memorial University – Rural

Strengths: Comprehensive Program. Utilizes the unique medical and geographic characteristics of the province.

Other Key Features: Strong rural emphasis.

Common Clinical Encounters: The student will learn to deal with a wide breadth and variety of problems through the whole life cycle from conception to death. The student will learn to provide comprehensive care over time and manage early, undifferentiated symptom presentation.

Workload: Varies according to the site and rotation.

Research Expectations: Residents are required to do a Resident's Project over the course of the two-year residency.

Areas to Improve Program: Increase funding and resources.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Family Medicine or Rural Family Medicine, especially in Newfoundland and Labrador.
- › **Other:** Demonstrated interest in Family Medicine. Wide variety of interests and involvement. Work well as a member of a team.

Northern Ontario School of Medicine – Thunder Bay

Strengths: Outstanding opportunities for learning in an environment with minimal other learners. Primarily preceptor based experience. Outstanding, proven rural, Northern preceptors. Cohesive motivated resident group. Program very sensitive to resident input. Exceptional recreational opportunities like canoeing and skiing.

Other Key Features: Many varied learning opportunities in communities of varied size from Muskoka to the Manitoba border. Family medicine residents are front of the line in most situations including procedural learning. Theme oriented educational events like "Mills and Mines" where residents experience those environments and learn occupational health. Aboriginal and francophone opportunities.

Common Clinical Encounters: Residents working in a Northern community with the opportunity to experience and learn full spectrum family medicine under the guidance of an experienced local physician. Emergency, ICU and specialty experiences with motivated energetic preceptors.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	4 days/week	1/2 day academic per week or two days per month	Varies with rotation; monthly home call
<i>Second third of program</i>	4 days/week	1/2 day academic per week or two days per month	Varies with rotation; monthly home call
<i>Final third of program</i>	4 days/week	1/2 day academic per week or two days per month	Varies with rotation; monthly home call

Research Expectations: All residents are expected to complete a research project in the 2 years of the program to be presented on our annual research day. Chart audits and critical appraisal skills are also taught.

Areas to Improve: The coordination of a widely distributed program remains a challenge. The development of a new program is both a challenge and opportunity for all involved. It is an exciting and stimulating process requiring active and engaged learners who are prepared to contribute.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Family medicine, Northern and rural experiences would give students an opportunity to experience what we have to offer.
- › **Other:** The residency should allow graduates to comfortably practice in any environment in Canada. Other sites include Sault Ste Marie, Timmins and North Bay.

Northern Ontario School of Medicine — Sudbury, Sault Ste. Marie, Timmins, North Bay and Northern Ontario, Rural.

Strengths: One-to-one learner–teacher contact in the context of real-world Family Medicine practice in the large and small communities of northeastern Ontario.

Other Key Features: Our program provides a very resident-focused training period that will lead you to competence in Family Medicine practice for any Canadian community.

Common Clinical Encounters: This is not something we enumerate regularly. During the two-year program, our residents will see a wide variety of common and serious manifestations of several disease and illness states in several different clinical settings, including rural and urban offices, emergency departments, hospitals, and other clinical settings.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	5 days/week	two days per month	Varies with rotation; monthly home call
<i>Second third of program</i>	5 days/week	two days per month	Varies with rotation; monthly home call
<i>Final third of program</i>	5 days/week	two days per month	Varies with rotation; monthly home call

Research Expectations: Over the course of the two-year residency, each resident is required to complete one research project.

Areas to Improve: We rely constantly on suggestions from our residents regarding how to improve our program. The distributed nature of the program requires constant effort to maintain communication with residents and faculty.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Our program values all elective experiences appropriate for a student interested in Family Medicine practice in northern or rural communities.
- › **Other:** Demonstrate genuine interest in Family Medicine. Have an appreciation for rural and northern lifestyles. Be a willing participant in a program that demands adult learning.

University of British Columbia — Northern/Rural, Prince George

Strengths: Collegiality: working with experienced generalists, very much enjoying their personal and professional lives, and keen to share the bounty. Hands-on experience: lots and lots, in a General-Practice-centred environment. Family Practice residents get priority attention for procedures and other core experiences. Community life: being able to settle in one town (Prince George) for the entire foundation (first) year in community with peers, before enjoying priority (along with other Rural Program residents) in the selection of rural placements for PGY2.

Other Key Features: This is a program for generalists. If you're having difficulty deciding which specialty you like most (because you've enjoyed them all), then you should consider small-town general practice. And if that's your passion, why not train among general practitioners and specialists who believe that's the purest, most gratifying form of medical practice? Small-town general practice is for humble folk who are thrilled to be doctors. If you are the top of your class, we won't hold it against you. But that won't predict whether you're going to find joy in generalist medicine. Ask yourself whether you get a charge out of getting to know people and being helpful to them. (No shame if you don't, but you won't enjoy full-service Family Medicine.) Do you have a common touch? Does shifting gears (i.e., encountering a totally different clinical presentation) 30 times a day appeal to you? Do you enjoy working in a community with like-minded colleagues? Crucial questions? Come and meet us in Vancouver.

Common Clinical Encounters: Full-service Family Medicine. R1 core Family Practice experience in a purpose-based clinic serving 15,000 people. Trauma (ER, Orthopedic, Surgery, Family Practice). Other acute medicine and surgery. Normal Obstetrics (probably — at least it's the most common hospital diagnosis). The range of mental health concerns, including substance use disorders.

Workload: First year is in Prince George. Ten months of specialties; two of FP. Six months of 1:4 call. Two months of 1:3 (out-of-house during Surgery and Orthopedics — rarely called after midnight). No call for two months. Second year — see UBC Rural Program Website. Up to nine months in B.C. rural communities or elsewhere. ICU and Trauma rotations available in Prince George or Vancouver. Welcome to return to Prince George or go elsewhere for electives.

Research Expectations: First year: Base FP audit. Second year: Resident Project — a “work of scholarship” — the scope of which is up to the resident. Projects range in “ambition” from essays to RCTs. Depends on previous training and experience and the inclination of the resident. Meant to be fun. Don't let it get too big. Very much up to the resident.

Areas to Improve Program: Continue efforts to attract first-class residents — the quality of the residents makes the Program! Additional support to rural practitioners to ease the financial burden they sometimes face hosting residents in their communities.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Additional rural communities. Additional Obstetrics. A “cobbled-together” procedural skills month: Anesthesia, Ophthalmology, Urology, Minor Surgery, etc. Residents find it easy to organize these themselves. Elective time is in PGY2.
- ▶ **Other:** Include at least one reference from a full-service family doctor, ideally one from a small town. Send to the department to get all your questions answered. Attend one of the UBC Open House Days in Vancouver and talk to the northern residents in attendance. If you're keen, tell them.

University of Calgary – Rural

Strengths: Education above service, with hands-on, predominantly home-call experience. Same academic program as parent university. Extra costs for Rural program, including PDA/laptop, covered by program.

Other Key Features: PDA given to residents and laptop provided for two years. Most rural sites have paid accommodation for families. Call predominantly from home. Full National Accreditation in 2003. Accreditation team–commended program for rapid responses to resident concerns. Complete two-year curriculum for academics in place. Excellent opportunities to move to PGY3 positions. One-to-one teaching ratios in specialties.

Common Clinical Encounters: Unable to quantify, as the breadth of Family Practice and the program spans Trauma, Obstetrics, upper respiratory tract infections, Cardiology, O.R. assists, and minor procedures.

Workload	Call
<i>Residents set own maximum</i>	1:3

Research Expectations: Evidence-based medicine course and either research project over two years or practice improvement project in first.

Areas to Improve Program: Increase information technology (I.T.) skills of students and continue to enhance communication.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Rural Family Medicine. Family Medicine regardless of site.
- ▶ **Other:** Complete Rural elective. Demonstrate initiative and insight. Be an enthusiastic team player.

University of Toronto – Rural

Strengths: Excellent rural training sites; flexibility in choice of site. Full second year in rural practice. Broad scope of clinical and procedural experiences — office, emergency, hospital.

Other Key Features: Excellent 1:1 teaching during rural experiences. Flexible third-year programs that can be tailored to meet your goals. Progress testing to assess Family Medicine Expert role.

Common Clinical Encounters: Common problems in Family Medicine — acute and chronic, minor and serious. Multiple medical problems, e.g., DM, BP, heart disease. Psychosocial problems in individuals and families. Preventive health care and well-person counseling for all ages. Procedures in office, emergency, hospital.

Workload: Varies from site to site; resident-determined; call 1:4 or less, follows PAIRO guidelines.

Research Expectations: PGY2 research or academic project is required. Usually a small project with supervision support. Project may be done in small group of two to three residents.

Areas to Improve Program: Greater consistency of clinical experiences across sites. Larger number of third-year funded positions.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Rural Family Medicine. Emergency Medicine. Area of interest relevant to Family Medicine (within Internal Medicine, Surgery, Pediatrics, Psychiatry, OB/GYN, etc.).
- ▶ **Other:** Gain understanding of Rural Family Medicine. Do one elective in Rural Family Medicine. Obtain strong reference from one Rural Family Physician.

University of Western Ontario – Southwestern

Strengths: Community-based. Broad range of clinical experience — clinic, nursing home, emergency room, community hospital. Freedom to design your own program through a wide variety of electives/selectives.

Other Key Features: Western's Rural program allows residents to design a program unique to their learning needs. As a result of the population density, residents can have a rich, rural learning experience without being significantly isolated geographically from their families and friends.

Common Clinical Encounters: Musculoskeletal injuries, dermatology, diabetes mellitus, psychological problems, hyperlipidemia and heart problems.

Workload: Our program is an integrated two-year program. Workload depends on the individual rotations. On-call varies with the rotation and location but does not exceed PAIRO contract.

Research Expectations: Residents are expected to complete and present one research project by the end of their second year.

Areas to Improve Program: More specialty rotations into non-academic centres. Increased interaction between Rural residents.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** We expect students to demonstrate an interest in broad-based medicine by taking a variety of electives in fields pertinent to Family Medicine, e.g., Emergency, Obstetrics, Cardiology, etc.

› **Other:** Since reference letters are usually all excellent, a bad reference letter really causes concern. Demonstrated ability to work on teams. Demonstrated interest in Family Medicine.

Programs Not Responding

University of Manitoba

GENERAL SURGERY

Description of Specialty

General Surgery is a branch of surgery that deals primarily with gastrointestinal surgery. It also includes colorectal, pediatric, trauma, and transplantation surgeries, as well as management of the head and neck, breast, endocrine system, and peripheral vascular system. However, with subspecialization, some general surgeons may limit their practices to one of the above.

Overview of Program

All programs in General Surgery are at least five years in duration. Certain schools offer six-year programs; certain others offer an optional PGY6 year. In general, the PGY1 and PGY2 years of General Surgery training are the “core program.” Experience is gained in a variety of surgical and non-surgical fields. During the five-year residency, a minimum of 30 months is spent in General Surgery rotations; included in those months is at least one year as a senior or chief resident. Candidates spend one other year of training pursuing a choice of available options. These options may include training in General Surgery, Research, Pathology, or other approved subjects such as Plastic Surgery, Gynecology, Urology, Critical Care, Pathology, Gastroenterology, Internal Medicine, Infectious Disease, Transplantation, or Interventional Radiology.

Some schools offer an additional, separate program designed to prepare trainees for a career in community-based General Surgery.

Accredited programs

- › Critical Care Medicine (three years of Anesthesia, Cardiac Surgery, Emergency Medicine, General Surgery or Internal Medicine required before entry)
- › Research Fellowship (if through Clinician Investigator Program)
- › Vascular Surgery (available to graduates of General Surgery, Cardiac Surgery and Cardiothoracic residency programs)

Certificate of Special Competence

- › Cardiothoracic Surgery
- › Pediatric General Surgery

Accredited program without certification

- › Colorectal Surgery
- › General Surgical Oncology

Fellowships offered without Royal College Status

- › Endoscopy
- › General Surgical Oncology AC
- › Hepatobiliary and Pancreatic Surgery
- › Laproscopic/Minimally Invasive Surgery
- › Rural General Surgery
- › Surgical Education
- › Transplantation

** See <http://www.cags-accg.ca/cagsaccg.php?page=17> for location and durations of Postgraduate Fellowships in General Surgery

2010 Quota – Total Positions 109

	Quota	IMG Quota
Dalhousie University	6	1
McGill University	7	–
McMaster University	8	–
Memorial University	3	–
Northern Ontario School of Medicine	2	–
Queen's University	3	–
Université de Montréal	10	–
Université de Sherbrooke	7	–
Université Laval	9	–
University of Alberta	8	–
University of British Columbia	8	–
University of Calgary	6	–
University of Manitoba	5	–
University of Ottawa/Université d'Ottawa	6	1
University of Saskatchewan	5	–
University of Toronto	11	3
University of Western Ontario	5	1

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

- Strengths:** 1) Extensive early operating experience. 2) Extensive community rotations. 3) Highly collegial staff-resident relations. 4) Few fellows to interfere with residents at surgeries. 5) Advanced minimally invasive surgery program.

Other Key Features: 1) Separate Junior and Senior Academic half days. 2) Halifax! Great little city. 3) Easy to arrange almost any elective.

Common Clinical Encounters: Hepatobiliary. Surgical Oncology. Surgical Endocrinology. Colorectal Surgery. Hernia and reconstructive abdominal wall surgery. Transplant program. Trauma program. Advanced minimally invasive surgery program.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	Varies	Varies	1 in 4
Second third of program	Varies	Varies	1 in 4
Final third of program	Varies	Varies	1 in 4

Research Expectations: Two research projects to be completed in five years.

Areas to Improve Program: 1) Increased operative volumes at more senior levels. 2) No well-developed bariatric surgery program at this point. 3) Need for more female surgeons.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Surgery electives but not all in General Surgery. Helps to do elective in Halifax but not necessary.
- › **Other:** Applicants with strong work ethic, research interests, and solid patterns of performance are favoured.

McGill University

Strengths: Technical exposure — both community and teaching hospital. Research exposure — Epidemiology, education, basic science. Strong teaching, both formal and informal.

Other Key Features: Lots of teaching, potential for research, and great technical exposure.

Common Clinical Encounters: Trauma, surgical oncology, hepatobiliary–pancreatic, minimally invasive surgery, transplantation.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50%	25%	25%
Second third of program	50%	25%	25%
Final third of program	50%	25%	25%

Research Expectations: Up to the resident: from none to six-month long clinical project or diploma in M.Sc. level Epidemiology to an M.Sc. in Epidemiology/Education/Basic Science to a doctorate or higher Ph.D. in Experimental Surgery.

Areas to Improve Program: More evaluations of staff/services.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Surgical Intensive Care, Surgical Oncology, Hepatobiliary.

› **Other:** The successful applicant should complete electives in General Surgery at McGill University and have scientific publications.

McMaster University

Strengths: Early and Extensive operative exposure. Cohesive group of residents. Excellent clinical teachers. Excellent Academic half day including technical skills session. Participation in CMAJ Training.

Other Key Features: Opportunity for community and international electives. Excellent pass rate for graduates sitting Royal College Exams.

Common Clinical Encounters: Wide range of General Surgery experiences including Surgical Oncology, Hepatobiliary Surgery, Colorectal surgery, Pediatric surgery, Critical Care, Vascular, Trauma and Thoracic Surgery. Wide range of patient acuity from clinical outpatients to critically ill patients.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	3–4	12	1:4
Second third of program	3–4	12	1:4 or 1:3 home
Final third of program	3–4	12	1:4 or 1:3 home

Research Expectations: Two completed projects to be presented at research day over 5 years.

Areas to Improve: Aiming to increase funding for residents who choose to pursue a Master's degree.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** General Surgery, Trauma and Critical Care electives. Other medical and surgical electives to be certain of choice of General Surgery.

› **Other:** General Surgery is a demanding but exciting career that has many options for tailoring one's career whether it is community surgery, academic surgery or subspecialization in a wide range of fields.

Memorial University of Newfoundland

Strengths: Clinical experience throughout the residency. Community General Surgery experience.

Other Key Features: One of the best clinical experiences in surgical practice of any Canadian residency program. Wide range of elective and community experience allows resident to tailor program to personal interests.

Common Clinical Encounters: Acute gastrointestinal complaints, benign/malignant breast disease, GI malignancy, acute vascular conditions, endocrine surgical conditions.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50–60	5–10	1 in 4–5
Second third of program	50–60	5–10	1 in 6–8
Final third of program	50–60	10–20	1 in 2 home

Research Expectations: Residents are required to complete two research projects during their residency program. They may also seek an M.Sc. in Clinical Epidemiology or Surgical Education.

Areas to Improve Program: Ensure regular feedback.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Community General Surgery, developing-country elective, any clinical elective demonstrating interest in surgery.

› **Other:** The successful applicant should demonstrate personal commitment to a surgical career, and personal satisfaction from surgical endeavours.

Queen's University

Strengths: Small program. Close working relationship with faculty. Dedicated faculty. Pleasant lifestyle in smaller city.

Other Key Features: Royal College Accredited. Five-year program. Research Mandatory. Out of town rotations in Oshawa.

Common Clinical Encounters: Full range of general surgery except transplantation and Bariatric surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	60–100	5–10	1:4 in hospital
Second third of program	60–100	5–15	1:3 home
Final third of program	60–100	10–20	1:3 home

Research Expectations: Mandatory.

Areas to Improve Program: Broad range of Medical and Surgical Electives preferred.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** On site electives helpful but not required.

Université de Sherbrooke

Key Features: Advantages include good contact with teachers, personal supervision/follow-up, early technical exposure, and a family-like environment.

Strengths: N/A

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	7	6x12h/mth
Second third of program	40	9	6x12h/mth
Final third of program	40	12	6x12h/mth

Research Expectations: N/A

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** N/A

› **Other:** N/A

University of Alberta

Strengths: Large variety of cases. Strong academic program with interested and enthusiastic surgeons. Strong research tradition with established clinical investigator program, plus the ability to pursue basic research.

Other Key Features: One of the highest pass rates on the Royal College examinations. Large clinical volume, with many opportunities to operate at a junior level. OR time is balanced with a strong academic program, with dedicated half days for didactic seminars, panel discussions, anatomy review, and research. Research opportunities are extensive, with many recent residents having achieved M.Sc. or Ph.D. degrees.

Common Clinical Encounters: GI surgery and GI surgical oncology. Liver, pancreas, and islet transplantation. Head and neck oncology. Multisystem trauma. Community General Surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5	1 in 4
Second third of program	50	10	1 in 4
Final third of program	70	10	1 in 3 home

Research Expectations: Residents must complete a yearly research project during PGY2-4 inclusive. There are many opportunities available to pursue an M.Sc. or Ph.D.

Areas to Improve Program: Increase funding and resources.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Any General Surgery service in the city.

› **Other:** Candidates wishing to be successful must make sure they are truly interested in a career in surgery. They are encouraged to come and have a look at the program and talk to our residents.

University of Calgary

Strengths: Clinical training, research, preceptorship.

Other Key Features: None.

Common Clinical Encounters: Acute abdomen, multiple trauma, surgical oncology, cholelithiasis, hernia.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1 in 4
Second third of program	50	10	1 in 4
Final third of program	50	10	1 in 4

Research Expectations: One completed project is due by the PGY4 year. The opportunity exists for pursuit of a Master's degree.

Areas to Improve Program: Increase surgical skills laboratory training. Increase advanced laparoscopic experience.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** General Surgery in Calgary.

› **Other:** Successful applicants must demonstrate commitment to becoming a general surgeon, becoming known by pursuing electives in their chosen program, and deciding early on a career path.

University of Manitoba

Strengths: Excellent variety of clinical cases. Very good teaching. Friendly program.

Other Key Features: N/A

Common Clinical Encounters: Pancreatitis, biliary tract disease, colorectal cancer, appendicitis, breast cancer.

Workload	Call
First third of program	1 in 3
Second third of program	1 in 3
Final third of program	1 in 3

Research Expectations: All residents are expected to complete two projects for publication in the five years.

Areas to Improve Program: Increase research profile. Increase number of surgical skills courses.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Surgery, trauma surgery, colorectal or hepatobiliary surgery.
- › **Other:** Successful applicants must show enthusiasm for the specialty, have suitable electives in the field, and have outstanding letters of reference.

University of Ottawa

Strengths: Wide experience of all types of surgery, to which all residents have equal exposure. Graduated and progressive OR experience and clinical responsibility. Strong community surgery ties. Enthusiastic new faculty.

Other Key Features: We aim to train competent general surgeons. We highly value candidates who are collegial and work well in a team. We assume that all candidates, by virtue of completing medical school, have the academic ability to successfully complete a residency.

Workload: Call is in-4 accordance with PAIRO guidelines, junior call is in-house, and, as a senior resident, 1-in-3call is home call.

Research Expectations: All residents must do two projects during their five years. They may elect to go into Surgeon Scientist year for one to three years.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Surgery.
- › **Other:** The successful applicant should show an interest in General Surgery and demonstrate that he/she is a well-rounded person and a team player.

University of Toronto

Strengths: Unsurpassed breadth and depth of clinical education opportunities, committed faculty and strong resident engagement. Wide range of formal education rounds, visiting professorship, surgical skills training and simulation based teaching. Large volume, highly focused services (e.g., community, trauma, oncology, transplant). Surgical scientist program for those interested in learning more about research methodologies and formal research training.

Other Key Features: Excellent exposure to both community and academic surgery tailored to meet residents' aspirations. Committed program director and associate program director.

Common Clinical Encounters: Include all aspects of General Surgery including exposure in endoscopy, vascular surgery, trauma and critical care.

Workload: Busy clinic and OR schedules: on call schedules as per PAIRO regulations.

Research Expectations: Residents must undertake a research project with evidence of work product as part of program in the five years, with the expectation of presentation at the Annual General Assembly of General Surgeons. Research meetings for PGY4/5 are paid for. In addition, selected residents have the opportunity to pursue a graduate degree as part of the surgeon-scientist program.

Areas to Improve Program: Greater integration of distributed medical education sites, specifically the Mississauga campus of the U of T Medical School.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Surgery and related areas such as vascular, ICU, medical imaging.
- › **Other:** Knowledge of the career and demonstration of academic excellence. Elective experience. Strong personal letter, with evidence of commitment to General Surgery as a career. Review carefully the CaRMs website for specific formatting and content information.

University of Western Ontario

Strengths: Five-year program. Medium sized (4-6 residents/yr). Excellent clinical volumes. Flexible training program with elective 3rd year to meet career goals.

Other Key Features: CSTAR for MIS and robotics. Excellent community partners for a strong community clinical rotations. Level I trauma center. Top transplantation program. Strong research. Outstanding educational program.

Common Clinical Encounters: All areas of general surgery; surgical oncology; endocrine surgery; trauma surgery; colorectal surgery; hepatobiliary surgery, and full endoscopy.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	75	10	1:4 to 1:6 in house
Second third of program	60	20	1:6 to 1:8 home call
Final third of program	75-90	10	1:4 home call

Research Expectations: Four research projects in five years. Opportunity to obtain masters degree. Monthly journal club/EBM.

Areas to Improve: Recruitment of another MIS surgeon.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Electives in General Surgery to demonstrate understanding of practice. Can be academic or community elective. Elective in GI and ICU useful.

Programs Not Responding

Northern Ontario School of Medicine

Université de Montréal

Université Laval

University of British Columbia

University of Saskatchewan

INTERNAL MEDICINE

Description of Specialty

An Internist is a specialist trained in the diagnosis and treatment of a broad range of diseases involving all organ systems, and is especially skilled in the management of patients who have undifferentiated or multi-system disease processes. An Internist cares for hospitalized and ambulatory patients in both community and academic settings and may play a major role in teaching, health promotion and advocacy, and research.

Overview of Program

Canadian Internal Medicine programs require a minimum commitment of four years. Those who choose not to subspecialize can become General Internists after these four years. Students who choose to subspecialize are required to complete two years of subspecialty training, which they can often begin after the successful completion of three core years in General Medicine, for a total of five years of postgraduate education. In order to assure an adequate breadth of training, residents are limited to no more than six months in any subspecialty program during their core three-year rotations. The core three years include a minimum of 12 months of training in General Internal Medicine, whether on a General Medicine clinical teaching unit, a General Medicine consultation service, or an Ambulatory Care block rotation. Residents acquire further experience in a variety of subspecialty fields that include Critical Care Medicine, Cardiology, Infectious Diseases, Neurology, Respiratory Medicine, Rheumatology, Endocrinology/Metabolism, Gastroenterology, Geriatrics, Hematology, Medical Oncology, Clinical Allergy and Immunology, Dermatology, and Nephrology.

Sunny from Case 6 should enter an Internal Medicine residency program to prepare himself for a career as a Cardiologist. After three years of core Internal Medicine, Sunny will apply for further training in Cardiology through the R4 Match. More information on the R4 Match, including the application process and statistics, can be found on p. 214.

Accredited programs:

- › Cardiology
- › Clinical Immunology and Allergy
- › Clinical Pharmacology (two years) entry from PGY4 Anesthesia or Psychiatry or PGY3 Core Internal Medicine or Pediatrics
- › Critical Care Medicine (three years of Anesthesia, Cardiac Surgery, Emergency Medicine, General Surgery, or Internal Medicine required before entry)
- › Endocrinology and Metabolism
- › Gastroenterology
- › General Internal Medicine
- › Geriatric Medicine
- › Hematology
- › Infectious Disease
- › Medical Oncology
- › Nephrology
- › Occupational Medicine
- › Respiriology
- › Rheumatology

Accredited program without certification:

- › Transfusion Medicine Fellowships offered without Royal College Status
- › Cardiology
 - › Echocardiology
 - › Electrophysiology Research
 - › Interventional Cardiology
- › Endocrinology
 - › Diabetes
 - › Thyroid Disorders
 - › Lipid Metabolism
 - › Bone and Calcium Disorders
 - › Neuroendocrinology
 - › Reproductive endocrinology/in vitro methodology
 - › Obesity
- › Gastroenterology
 - › Hepatology and Liver Transplant
 - › Inflammatory Bowel Disease
 - › Nutrition (Adult and Pediatric)
 - › Therapeutic Endoscopy
- › Nephrology
 - › Kidney and Pancreas Transplant

2010 Quota – Total Positions 396

	Quota	IMG Quota
Dalhousie University	11	2
Northern Ontario School of Medicine	6	–
McGill University	33	–
McMaster University	20	3
Memorial University	8	–
Queen's University	12	4
Université de Montréal	40	–
Université de Sherbrooke	30	–
Université Laval	32	–
University of Alberta	20	–
University of British Columbia	39	2
University of Calgary	23	–
University of Manitoba	14	–
University of Ottawa/Université d'Ottawa	18	2
University of Saskatchewan	18	–
University of Toronto	47	7
University of Western Ontario	25	5

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Outstanding clinical teachers. Funded annual conference and travel leave. Graded call schedule.

Other Key Features: The clinical training in the Dalhousie Internal Medicine program must be considered one of its strongest points. The program consists of 36–42 residents in the three core years and about 20 in the subspecialty programs. It gives residents the opportunity to get to know faculty members quite well, making the working environment very collegial. Members of the Department of Medicine are compensated by an Alternative Funding Plan, which means they do not suffer from the same pressures to maximize patient throughput in their clinics; this gives those who are genuinely interested in teaching the chance to do so almost as much as they wish. Halifax serves as the tertiary and quaternary care for most of the Atlantic provinces, so the variety of patient problems is great.

Common Clinical Encounters: Dyspnea (CHF, COPD exacerbation, PE, community-acquired pneumonia). Chest pain (acute MI, community-acquired pneumonia, PE, missed thoracic aortic dissection). Undifferentiated acute confusional state (infection, metabolic, etc.). Acute renal failure (pre-renal, postrenal, renal). Dyscopia—a slowly progressive, non-acute functional decline requiring general Internal Medicine intervention to generate an admission diagnosis and treatment plan/discharge.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40–50	5–10/wk	1 in 4/5
Second third of program	40–50	5–10/wk	1 in 4/7
Final third of program	40	10–20/wk	1 in 6/8

Research Expectations: Residents are expected to be involved in at least one research project annually, but not in first year. Up to three months of protected research time can be taken.

Areas to Improve Program: Increase non-tertiary-level Internal Medicine exposure. Implement longitudinal research clinics.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Internal Medicine. Any other subspecialty of medicine, preferably with involvement with both inpatients and outpatients.
- › **Other:** An elective in Internal Medicine. Outstanding references: an on-site reference from Dalhousie is beneficial. Contact our residents and get an inside perspective of our program first-hand.

McGill University

Strengths: Training in fundamental clinical skills. Dynamic and involved teachers. Strong general Internal Medicine outpatient clinical experience. Simulation-based training.

Other Key Features: Epidemiology curriculum is supplemented with a course offered to senior residents (R2–R3) that has received excellent feedback.

Common Clinical Encounters: Congestive heart failure; pneumonia and exacerbation of COPD; acute delirium; inflammatory bowel disease; stroke.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	3	4	6/28 days
Second third of program	3	6	6/28 days
Final third of program	3	6	6/28 days

Research Expectations: Residents are encouraged, but not required, to participate in a research project. Most residents complete a research project in a field of their interest. This is generally begun in the second year of the program, facilitated by the Resident Research Coordinator. Some ultimately go on to complete a Master's, but this is generally after the third year of training.

Areas to Improve Program: Improving facilities and services through increased health care spending at governmental level.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any elective in Internal Medicine or its subspecialties may be useful.
- › **Other:** Good clinical evaluations in Internal Medicine rotations. Strong letters of reference. Strong performance in the interview.

McMaster University

Strengths: Resident-centered program, with highly committed and collegial faculty. Medium sized program with balance of educational and clinical responsibilities. Dedicated Academic Curriculum with Program Retreats. Early clinical experience to ICU in PGY-1 year with close supervision. Graded responsibility over 3 years, with all residents completing a Chief Medical Resident role of 3 months duration in PGY-3 year.

Other Key Features: Broad clinical exposure with both secondary and tertiary level of care due to a large catchment referral area. Resident leadership in all facets of curriculum development and evaluation. Research Curriculum and support of Research Director to meet scholarly goals.

Common Clinical Encounters: Center of excellence in Cardiac Care(CHE, Acute Coronary Syndromes, Arrhythmias), Firestone Respiratory Institute(Asthma, COPD, Occupational Lung Diseases), GI(IBD and Functional Bowel Syndromes). Broad exposure to clinical material in all other subspecialties.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	10	4 – 8	1:4 to 1:7
Second third of program	10	4 – 8	1:5 to 1:10
Final third of program	8	5 – 10	1:7 to 1:10

Research Expectations: All Residents complete a Quality Improvement Project. Formal Research Curriculum and Research Director to facilitate clinical and educational research. Annual Resident Research Day for PGY 1 to PGY 6 with representation from both Core Internal Medicine and Subspecialty Residents.

Areas to Improve Program: Need for more Hospital Resources to support Physicians to work on Non-CTU based teams(MD based teams) to help maintain balance of Education and Clinical Work on CTU based Teams. Formally develop a Simulation Curriculum into the Academic Program.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Electives at McMaster University in either Internal Medicine or Subspecialties are encouraged. Local references from Supervisors during electives are encouraged.

Involvement in committees in Undergraduate Medical Program are positively looked at. Leadership roles in Undergraduate Program should be highlighted in the Personal Letter and CV.

- › **Other:** N/A

Memorial University

Strengths: Small program — no fellows competing for clinical experiences. Clinical responsibility given early. Structured academic teaching, including weekly academic half day, research and design course, initial appraisal course. Opportunity to pursue MSc degree in Epidemiology concurrently. Small program creates a collegial atmosphere. Excellent core General Medicine program in good standing with the Royal College.

Other Key Features: Favourable faculty to resident ratio. Direct interaction with faculty. Opportunity for independence early if resident desires.

Common Clinical Encounters: All areas of Internal Medicine, such as acute coronary syndromes, heart failure, cardiac dysrhythmia, COPD, pneumonia, GI bleed, complications of liver disease, drug overdose, diabetic ketacidosis, acute and chronic renal failure, infectious diseases (such as UTI, cellulites, etc.), DVP/PE, malignancy – both newly diagnosed and undergoing therapy.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	24 wks CTU other rotations clinics		1:4 to 1:5
Second third of program	12 wks CTU, 8 wks ICU 8 wks CCU clinics		1:5 to 1:6
Final third of program	12 wks CTU, other rotations mainly clinics	8	1:6 to 1:7

Research Expectations: All residents expected to present a research project at annual resident research day at least once in 3 years. Research design course and mentoring system in place to facilitate this.

Areas to Improve: Continue to develop teaching and evaluation around various CanMEDS competencies.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any area of Internal Medicine. Electives done here most likely to help student experience the

strengths of the program.

- › **Other:** Have a good disposition. Show an eagerness to learn, work and see patients. Be curious and don't be afraid to offer opinions and ask questions.

Queen's University

Strengths: Excellent working relationship between staff and residents. Four months of electives, which may be taken anywhere in Canada. PGY3 year focus on ambulatory and consultative medicine.

Other Key Features: In recent years, all of our residents have been successful in obtaining their subspecialties of choice. Electives have been popular as a method of defining career choices.

Common Clinical Encounters: On CTU: Community-acquired pneumonia, congestive heart failure, stable upper and lower gastrointestinal bleeding, and stroke. On Cardiology: acute coronary symptoms.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50	Variable	1:4 to 1:6
<i>Second third of program</i>	50	Variable	1:4 to 1:6
<i>Final third of program</i>	45	Variable	1:25 in house, 1:5 home calls

Research Expectations: One mandatory research project, which can be medical education, quality assurance, basic science, clinical trial, or case series review.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any elective at Queen's in the DOM. Any Internal Medicine subspecialty or consultation service. Community Internal Medicine.
- › **Other:** Highlight ability to work as part of a team. Demonstrate intellectual curiosity. Show interest in the field of Internal Medicine.

University of Alberta

Strengths: Ideal size. Collegial, friendly atmosphere. Exposure to all aspects of medicine.

Other Key Features: We have a great group of contented residents of whom the faculty is proud.

Common Clinical Encounters: Ischemic heart disease and heart failure. Diabetes mellitus. Respiratory disease including COPD, asthma, and pneumonia. Renal failure. Thromboembolic disease.

Workload	Call
<i>First third of program</i>	1:4
<i>Second third of program</i>	1:4
<i>Final third of program</i>	1:6

Research Expectations: All residents are expected to complete a research project and are given one to three months depending on interest and approval by the Research Committee.

Areas to Improve Program: More exposure to outpatient and ambulatory medicine. Establish higher standards of performance for residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Family Medicine. Obstetrics and Gynecology. General Surgery.
- › **Other:** Develop and maintain a passion for medicine. It should be evident in your application. Demonstrate your ability to work in a team. Demonstrate an interest in research.

University of British Columbia

Strengths: Clinical case mix. Dedicated teachers. Residents' morale.

Other Key Features: Outstanding academic half day. Vancouver is an excellent place to live and work.

Common Clinical Encounters: Infections in immunocompromised patients. CHF. GI hemorrhages. Infections in injection drug users. Pneumonia.

Workload: Variable depending on service.

Research Expectations: None required/mandatory. Most residents undertake voluntary research projects or present clinical cases at Resident Research Day.

Areas to Improve Program: Increasing ambulatory experience. Balancing acute care versus subspecialty elective rotations.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Electives in Internal Medicine or its subspecialties. Emergency Medicine. Breadth of experience in non-Internal Medicine areas.
- › **Other:** Aptitude in Internal Medicine. Excellent interpersonal skills. Outstanding work ethic.

University of Calgary

Strengths: Collegial atmosphere with major participation by residents in decision-making and operation of the residency program. Strong, diverse teaching faculty. Strong, General Internal Medicine division and faculty so that the majority of teaching on the clinical teaching units is done by general internists. All areas of Internal Medicine are represented

including inpatient, ambulatory and community General Internal Medicine rotations.

Common Clinical Encounters: Cardiology/Coronary Care Unit, Critical Care Medicine, Endocrinology, Dermatology/Allergy, Geriatrics, General Internal Medicine, Infectious diseases, Nephrology, Hematology, Medical Oncology, Rheumatology, Respiriology.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	4	4–8	1:4
Second third of program	4–8	4–8	1:4
Final third of program	4–8	4–8	1:4

Research Expectations: Residents will develop knowledge of Evidence Based Medicine and critical appraisal of the medical literature. There are excellent opportunities to participate in research and academic projects. We have an annual research day at which residents present a variety of projects and research.

Areas to Improve: We are working on our community Internal Medicine rotations outside of Calgary in the smaller cities of Alberta. Our rotation in Lethbridge is very well rated and subscribed.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Rotations on Internal Medicine Clinical Teaching Unit and the specialties of Internal Medicine as above. Rotations in General Internal Medicine are especially valuable.
- › **Other:** Highly valued skills: Communication, Collaboration/ Teamwork, and Scholarly activity including teaching and academic projects.

University of Manitoba

Strengths: Night float call. Large catchment area—wide variety of pathology and opportunity for rural electives. Early clinical responsibilities.

Other Key Features: Night float call system reduces in house traditional 1 in 4 call. Faculty guided Academic Half-Day.

Common Clinical Encounters: Pre-operative assessment. ACS, COPD, Acute renal failure, newly diagnosed malignancy, complications of cirrhosis, DVT, PE.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	10	1 in 4
Second third of program	40	10	4 weeks of night float
Final third of program	40	10	4 weeks of night float

Research Expectations: Annual Residents Research Day. Each resident expected to present original research during residency training.

Areas to Improve: Increase the rural/community exposure. Further enhance an already growing research component. Expand the acuity of patients in CCU?

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any medical subspecialty or general medical consultation service, ICU, CCU, neurology, and dermatology.
- › **Other:** Take relevant electives. Demonstrate an interest in the program. Show residents and staff interest. Become involved in areas outside of medicine to maintain balance.

University of Ottawa

Anglophone Program (Training Site: The Ottawa Hospital)

Francophone Program (Training Site: Montfort Hospital)

Strengths: Enthusiastic, accessible involved staff. Graded responsibility (CTU/Critical Care in R1, SMR on CTU in R2, consult services/electives in R3). Collegial, cohesive interaction between staff and residents. Large amounts of clinical teaching in morning reports, noon rounds and medical education half day 30 bed Non Teaching service with Physician Assistants to assist in off loading CTUs.

Other Key Features: Strong emphasis on quality of life in addition to excellence in clinical skills. CTUs run by general internists. Numerous opportunities to be involved in clinical research; Dedicated CTUs for Respiriology, Cardiology, Nephrology and Medical Oncology (in addition to General Medicine). New University of Ottawa Skills and Simulation Centre for access to simulation training .

Common Clinical Encounters: Extremely varied: multiply ill complex medical patients, HIV, and tropical medicine (malaria, TB).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	45	10	7 call/block
Second third of program	45	10	6 call/block
Final third of program	45	10	5 call/block

Research Expectations: Research required; protected time in July and August for PGY2/3 residents to work on scholarly project

Areas to Improve: Continue to build non teaching program to offload CTUs.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Medicine CTUs and consult/triage service, ICU and Respiriology, Infectious Disease, Rheumatology consult services.
- › **Other:** Our program attempts to combine excellence in clinical teaching with a mentoring and supportive environment. We pride ourselves in the involved, interested staff and excellent clinical and didactic teaching.

University of Saskatchewan

Strengths: Small program. Unintimidating atmosphere. Strong academic program. Excellent pass rate on Royal College exams.

Common Clinical Encounters: COPD. ILD. Asthma. CF. Sleep disorders.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	10–30	5	1:3
Second third of program	10–30	5	1:3
Final third of program	10–30	5	1:3

Université de Sherbrooke

Strengths: Adapted, progressive on-call system, early exposure to intensive care, exposure to ambulatory care, ready availability of professors and a wide variety of academic activities.

Other Key Features: Well-established regional internships, ongoing for a number of years, possibility of spending a full year in one of our collaborating centres, program highly active in research.

Common Clinical Encounters: All internal medicine specialties are well established in our establishment, thus there is a broad spectrum of pathologies. As well, with CHUS being a large tertiary hospital centre, there is a throughput of patients and exposure that favourably compare with other programs.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	42	10	4-5 days/month
Second third of program	42	10	4-5 days/month
Final third of program	42	10	4-5 days/month

Research Expectations: Mandatory research internship during the program, some 40 research clinicians available, possibility of a Research Fellowship, financial and clerical support for the development and presentation of research projects, multiple publications by our residents (approximately 50/year).

Areas to Improve Program: Planning to implement an on-call system for a maximum of 16 hours, effective next year (on-call system already implemented for R2s a year ago).

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** None in particular; above all, must have a keen interest in internal medicine!
- › **Other:** N/A

University of Toronto

Strengths: Excellent teaching. Highly developed curriculum. Wide variety of clinical material.

Other Key Features: N/A

Common Clinical Encounters: Congestive heart failure, pneumonia, diabetes, acute coronary syndromes, cancer.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40–50	5–10	Up to 1:4
Second third of program	40–50	5–10	Up to 1:4
Final third of program	40–50	5–10	Up to 1:4

Research Expectations: Research is encouraged but not mandatory in core three years.

Areas to Improve Program: Improving the CRISP (academic half day). Improving residents' evaluation.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Internal Medicine at one of the teaching hospitals. Other Internal Medicine electives.
- › **Other:** High academic standing. A letter of reference from clerkship coordinator or U of T medicine teaching faculty. A strong interview.

Programs Not Responding

Université de Montréal

Université Laval

University of Western Ontario

NOSM

LABORATORY MEDICINE

Description of Specialty

Laboratory Medicine is not a residency program in and of itself; rather it encompasses six different specialties:

1) Anatomical Pathology

Anatomical Pathology is the study of the morphologic aspects of disease. Anatomical pathologists tend to specialize according to a particular organ system (Renal Pathology, Dermatopathology), laboratory method (Cytopathology, Electron Microscopy), or type of clinical case (Pediatrics, Forensics).

2) General Pathology

General Pathology is a broader field that is concerned with all components of laboratory investigation, including both morphological and non-morphological diagnostic techniques. This specialty incorporates aspects of Anatomical Pathology, Medical Biochemistry, Medical Microbiology, Hematopathology, and Transfusion Medicine.

3) Hematological Pathology

Hematological Pathology is focused specifically on disorders of the blood and blood-forming organs. The hematological pathologist is responsible for the provision of hematology services in the laboratory to aid in the detection, diagnosis, and monitoring of these disorders.

4) Medical Biochemistry

Medical Biochemistry is the study of biochemical abnormalities in human disease. Medical biochemists are involved in the management and operation of hospital biochemistry laboratories.

5) Medical Microbiology

Medical Microbiology deals with the prevention, diagnosis, and treatment of infectious diseases. The duties of a medical microbiologist may include management of clinical microbiology laboratories, direction of hospital infection control programs, clinical consultations, public health, and Epidemiology.

6) Neuropathology

Neuropathology is concerned with diagnosis and interpretation of diseases of the central and peripheral nervous systems, using a variety of laboratory investigations.

Each school offers a different combination of these six programs, and the CaRMS application process varies considerably by school. Some schools (Alberta, Calgary, Manitoba, McGill, Memorial, Saskatchewan) offer a variety of direct-entry programs by specialty. Other schools (British Columbia, Dalhousie, McMaster, Ottawa, Queen's, Toronto, Western) have one Laboratory Medicine residency program, and applicants may choose their specialty area of interest within that program. The majority of Laboratory Medicine residents are in Anatomical and General Pathology programs.

Overview of Program

Anatomical Pathology

Residency programs are five years in length. The first year at all schools consists of basic clinical training. This is generally followed by one or two years in Anatomical Pathology rotations (including Autopsy and Surgical Pathology) and two or three years of rotations in subspecialties of Pathology.

Accredited Programs

- › Forensic Pathology

Programs without Royal College Status

- › Bone and Joint Pathology
- › Breast Pathology
- › Cardiovascular Pathology
- › Cytopathology
- › Electron Microscopy
- › Dermatopathology
- › Endocrine Pathology
- › Gynecological Pathology
- › GI/Hepatopathology
- › Molecular Diagnostics
- › Oncologic Pathology
- › Pediatric Molecular Diagnostics
- › Pediatric Pathology
- › Sarcoma Pathology
- › Surgical Pathology

General Pathology

Residency programs are five years in length. The first year at all schools consists of basic clinical training. The details of

the next four years vary by school, but generally residents do rotations in the various specialties and subspecialties of Anatomical Pathology, as well as Medical Microbiology and Medical Biochemistry.

Accredited Program

- › Forensic Pathology

Hematological Pathology

This is either a four- or a five-year residency program consisting of one clinical year in Internal Medicine and other subspecialties, two laboratory years, and research and/or electives for the remaining time.

Accredited program without certification

- › Transfusion Medicine

Medical Biochemistry

This is a five-year residency program that includes approximately two years of General Medicine, two years of laboratory training, and one year of research and/or electives.

Medical Microbiology

Residency programs are five years in length. Two of the years are clinical, with one year usually a rotating internship and the other year being Internal Medicine, with a focus on Infectious Disease. There are also two years of Microbiology training, predominantly laboratory-based, and one elective year.

Neuropathology

All programs are five years in length and have the same basic components. The first year consists of basic clinical training, followed by one year of Anatomical Pathology (both Surgical and Autopsy), two years of Neuropathology, and one elective year.

2010 Quota – Total Positions 13

	Quota	IMG Quota
<i>Dalhousie University</i>	3	1
<i>McGill University</i>	–	–
<i>McMaster University</i>	–	–
<i>Memorial University</i>	–	–
<i>Queen's University</i>	2	1
<i>Université de Montréal</i>	–	–
<i>Université de Sherbrooke</i>	–	–
<i>Université Laval</i>	–	–
<i>University of Alberta</i>	–	–
<i>University of British Columbia</i>	–	–
<i>University of Calgary</i>	–	–
<i>University of Manitoba</i>	–	–
<i>University of Ottawa/Université d'Ottawa</i>	3	3
<i>University of Saskatchewan</i>	–	–
<i>University of Toronto</i>	5	3
<i>University of Western Ontario</i>	–	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Residency positions may be offered every second year for certain programs.

Programs Not Responding

Dalhousie University

Queen's University

McMaster University

General Pathology (GP)

Medical Biochemistry (MB)

Medical Microbiology (MM)

University of Western Ontario

University of Ottawa

University of Toronto

Anatomical Pathology

General Pathology

Hematological Pathology

Medical Biochemistry

Medical Microbiology

Neuropathology

University of British Columbia

1) Anatomical Pathology (AP)

2010 Quota – Total Positions 33

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	4	–
McMaster University	1	–
Memorial University	1	1
Queen's University	–	–
Université de Montréal	5	–
Université de Sherbrooke	2	–
Université Laval	5	–
University of Alberta	3	–
University of British Columbia	4	–
University of Calgary	3	–
University of Manitoba	3	–
University of Ottawa/Université d'Ottawa	–	–
University of Saskatchewan	–	–
University of Toronto	–	–
University of Western Ontario	2	–

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Residency positions may be offered every second year for certain programs.

Dalhousie University

Strengths: For over 15 years, residents have had a 100% pass rate at Royal College certification exams. One of the largest AP programs in Canada, with generally two to three residents in each PGY year. Excellent facilities and dedicated staff devoted to resident-focused program.

Other Key Features: We feel we have the best AP program in the country.

Common Clinical Encounters: Surgical Pathology. Autopsy and Forensic Pathology. Pediatric Pathology. Cytopathology. Neuropathology.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	~25	~10	24 in PGY1
Second third of program	~25	~15	~1/10 weekend
Final third of program	~25	~20	~1/20 weekend

Research Expectations: No research expected in first two years. Projects expected in all future years for presentation and publication.

Areas to Improve Program: We have made considerable improvements to our program and are always receptive to future improvements. Improvements for resident office space are planned for this year.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Anatomical Pathology. Surgery. Medicine Hematopathology.

› **Other:** Exposure to AP in medical school. Background of active research. Come for interview if requested.

McGill University

Strengths: Strong AP community with subspecialty practice, with all areas well covered by dedicated, enthusiastic staff. Strong history and enthusiasm for teaching; flexibility in the delivery of the program. A wealth of pathology material (high volume, excellent case mix) with a strong commitment to up-to-date handling and reporting in all participating departments.

Other Key Features: The mode of teaching is “mentorship,” with a one-to-one ratio on a monthly basis. The workload is tailored to the resident's level of knowledge. Electives are planned according to the resident's needs or interests.

Common Clinical Encounters: N/A

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	N/A	7–12	1/5
Second third of program	N/A	9–14	1/5
Final third of program	N/A	10–20	1/8

Research Expectations: Residents are encouraged to spend from six to 12 months of their training in research. The program is

flexible, allowing, on an individual basis, time to pursue research training, including degree-oriented research (M.Sc. or Ph.D.). It is mandatory for residents to present in at least two meetings.

Areas to Improve Program: Our core Basic/Systemic Pathology course needs continued development.

Areas to Improve Program: More evaluations of staff/services.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Internal Medicine—medical subspecialties—Dermatology, GI, etc. Surgery—surgical subspecialties. Oncology—gynecology.
- › **Other:** Scholastic record and interviews. Commitment to pathology. Previous electives and knowledge about pathology.

McMaster University

Strengths: Excellent volume of case material. Good teaching-to-service ratio. Flexibility in organizing electives.

Other Key Features: This program has a top-notch rotation in Forensic Pathology. Integrated Hematopathology. GYN-Oncologic Pathology, Breast Pathology, Bone Pathology, Neuropathology, integrated hepatobiliary and GI pathology and Cardiovascular Pathology electives are also highly rated. Newly introduced (since 2010) Molecular Pathology rotation is an excellent addition to the program and one of its kind and integrates applied molecular pathology in diagnosis and prognosis of diseases. Pediatric Pathology rotation is more intense with three dedicated pediatric pathologists with the amalgamation of Pediatric services at McMaster University Medical Centre. Upgraded and newly renovated state of the art autopsy suites to handle forensic, medical and infectious cases. There has been a 100% pass rate for the anatomical pathology residents at the royal college fellowship exams for the past 2 years. Residents have many opportunities to participate in undergraduate medical school teaching in a problem-based environment. The Department of Pathology and Molecular Medicine has a large basic research component for individuals interested in pursuing a research career.

Common Clinical Encounters: Intraoperative consultation. Routine sign-out and contact with clinicians for cases requiring further clinicopathological correlation. Clinicopathological rounds. Important interaction with coroners, police, and team members in dealing with medical-legal cases. Important interaction with pediatricians and genetic counselors for pediatric cases.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50–60	5–10	As per clinical service
<i>Second third of program</i>	40	5–15	Home call, 1/3–1/4
<i>Final third of program</i>	35–40	5–20	Home call, 1/3–1/4

Research Expectations: Residents are expected to do a research project every year except during their basic clinical training year. To support an excellent research program there is a research director, biostatistician and funding through the residency

program available to all residents with courses conducted in methodology and biostatistics. Many of these research projects lead to publication; however, this is not required which is strongly encouraged. Residents showcase their research at the annual resident research day held once a year. This is a high profile event with international guest speakers invited for lectures and judging of the presentations for all specialties of laboratory medicine under the department of Pathology and Molecular Medicine.

Areas to Improve Program: Increased protected teaching time for staff.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Anatomical Pathology. Forensic Pathology. Clinical Biochemistry, Hematopathology, or Microbiology.
- › **Other:** Electives in any branch of Pathology. Good, consistent performance in medical school. Positive attitude.

Memorial University

Strengths: Exposure to a wide variety of benign and malignant pathology. A mix of young, enthusiastic and older, experienced staff. Balance between clinical/service work and time for learning.

Other Key Features: An excellent mix of pathologic cases in all subspecialty areas, including Neuropathology, Pediatric Pathology, and Cytopathology. Opportunities for research.

Common Clinical Encounters: Gynecologic pathology and breast pathology. Inflammatory and malignant GI pathology. Prostate pathology. Inflammatory and malignant skin conditions. Exposure to a variety of lymphomas.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	4	1 day	1 in 4–6 weekends
<i>Second third of program</i>	4	1 day	1 in 4–6 weekends
<i>Final third of program</i>	2–3	2–3 days	1 in 6 weekends

Research Expectations: There is an expectation for all residents to be involved in some research project. The majority of our residents are involved in Master's level research. Some may graft on to an existing project.

Areas to Improve Program: Exposure to current outside experience by teleconferences. Travel funds.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Medicine. Surgery. Obstetrics/ Gynecology.
- › **Other:** Electives in AP. Background in basic clinical sciences. Strong clinical medicine background.

Queen's University

Strengths: Small program and friendly faculty. Enthusiastic teachers. Excellent computer/technical support. Flexible program with breadth of opportunity.

Other Key Features: Currently undergoing renewal/change, including new faculty. Exciting time to be starting. New cancer research facility. Lots of new opportunities.

Common Clinical Encounters: N/A

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50%	25%	25%
Second third of program	50%	25%	25%
Final third of program	50%	25%	25%

Research Expectations: At least one project, preferably more, during AP rotation. Must present at a provincial, national, or international meeting. Research may also be done during the six to 12 months of elective time or during other rotations.

Areas to Improve Program: Increase size of program to 10 residents (currently have six). Space may become an issue if there are 10 residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Laboratory Medicine. Oncology: Radiation, Surgical, or Medical. Hematology/Hematologic Oncology. General Medicine or Surgery.
- › **Other:** Evidence of dedicated interest in Laboratory Medicine with documented knowledge. Evidence of reasonable academic ability. Visual ability, pattern recognition. Well-rounded. Work well with others.

Université de Sherbrooke

Strengths: Sub-specialty training with specialists. Multicultural environment. On-line access of most medical scientific journals. Residency training in different medical centers. Up-to-date library.

Other Key Features: Slide seminars. Sub-specialty meetings. Weekly scientific presentations. Ethics course. French milieu.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	20	–
Second third of program	40	20	–
Final third of program	50	10	–

Research Expectations: Introduction to research. Mainly a clinical program of Anatomical Pathology with a practical approach.

University of Calgary

Strengths: Excellent and dedicated residents who are involved in decision-making and innovations in the program (curriculum, teaching, new rotations, etc.). Dedicated and energetic faculty at all participating institutions, with a wide range of subspecialty expertise and good staff-to-resident ratio. High success rate at RCPS examinations.

Other Key Features: The volume and range of Surgical Pathology specimens, including autopsies, provide excellent experience for the trainee. Balanced program (education versus service). An energetic and enthusiastic Residency Training Committee.

Common Clinical Encounters: Breast pathology. GI pathology. Neuropathology. Prostate needle biopsies. Kidney neoplasms.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)
First third of program	50	4
Second third of program	50	4
Final third of program	40	6

Research Expectations: Surgical Pathology. Autopsy Pathology. Molecular Pathology.

Areas to Improve Program: Increase space for residents' room. Increase number of residents.

MEDICAL STUDENT TIPS

- › **Other:** Electives in Pathology. Subspecialty interest. Research background.

University of Manitoba

Strengths: The centre for provincial consultations. Large amount of material in Surgical Pathology, Cytopathology, Autopsy. Provincial centre for Hematopathology/Molecular Pathology.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: 40 hours/week plus call time as scheduled, weekly Academic Half Day, conferences/rounds in regular schedule (mandatory and elective).

Research Expectations: One-year research elective available; otherwise, minimum of one presentation/year at departmental research day.

Areas to Improve Program: More subspecialty positions. More research funding.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Per student interest.
- › **Other:** Academic background. Displayed interest during medical school. Thoughtful personal letter.

University of Toronto

Strengths: Great breadth and depth of clinical material. Excellent teaching. Excellent research opportunities.

Other Key Features: AP is very closely intertwined with the program in General Pathology. The latter program trains residents for a more broad-based community practice that includes Hematology, Microbiology, and Biochemistry. In the early years of training, residents have the flexibility to choose which of the two streams they will follow.

Common Clinical Encounters: Histopathologic examination of tissues (mostly tumours) excised at surgery or biopsied to provide diagnostic, prognostic, and staging information. Provision of intraoperative consultation to surgeons in the diagnosis of tumours and other diseases. Cytopathologic examination of body fluids and aspirates for cancer diagnosis and screening. Performance of autopsies in the medicolegal investigation of death. Assessment of transplant rejection through postoperative examination of graft biopsies.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	5	0
Second third of program	40	5	0
Final third of program	30	10	0

Research Expectations: Residents are expected to do research and complete at least two projects in residency. Residents may use up to one year of elective time in research and are supported if they wish to pursue graduate-level activity in the Clinician-Scientist program.

Areas to Improve Program: Expand teaching program in ethics. Increase journal clubs.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** General Anatomical Pathology. Subspecialty Anatomical Pathology. Any clinical specialty that interacts with Pathology (General Surgery, OB/GYN, ENT, Radiation Oncology, Medical Oncology, GI, Neurosurgery).
- ▶ **Other:** Show interest in the specialty. Do electives in the specialty. Show ability during elective to have a knack for the skills of the specialty (and also demonstrate competence in clinical aspects of medicine in general).

University of Western Ontario

Strengths: Very collegial working relationship between residents and consultants. Well-organized, efficient program with dedicated teachers, leading to well-trained pathologists. Unparalleled success at RCPSC exams; no failures in more than a decade.

Other Key Features: Small program with excellent teaching and congeniality. Largest single source of clinical material in one site in Canada.

Common Clinical Encounters: Diagnoses of tumours by biopsy. Application of pathological staging to cancer resections prior to adjuvant treatment. Assessment of common inflammatory conditions such as IBD. Intraoperative assessment of tumours—diagnosis or resection margins. Medicolegal investigations of death.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	6	3
Second third of program	50	9	3
Final third of program	50	12	3

Research Expectations: Two research projects over five years.

Areas to Improve Program: Increase funds for resident travel. Increase opportunities for research.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Pathology. Pathology. Pathology.
- ▶ **Other:** Do electives in pathology. Be curious and bright, and, above all, personable, decent, and honest. Have a broad clinical background.

Programs Not Responding

Université de Montréal

Université Laval

University of Alberta

University of British Columbia

University of Ottawa (Anatomical & General Pathology)

2) General Pathology

2010 Quota – Total Positions 3

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	–	–
McMaster University	1	–
Memorial University	–	–
Queen's University	–	–
Université de Montréal	–	–
Université de Sherbrooke	–	–
Université Laval	–	–
University of Alberta	–	–
University of British Columbia	–	1
University of Calgary	–	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	–	–
University of Saskatchewan	2	–
University of Toronto	–	–
University of Western Ontario	–	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Residency positions may be offered every second year for certain programs.

Dalhousie University

Strengths: Excellent community-based hospital rotation. Excellent facilities and dedicated staff devoted to residents. Diverse clinical material.

Other Key Features: Excellent community-based program. Excellent support of all laboratory divisions.

Common Clinical Encounters: Surgical Pathology. Autopsy and Forensic Pathology. Hematopathology. Microbiology. Medical Biochemistry.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	~25	~10	~1/6 weekend
Second third of program	~25	~10	~1/6 weekend
Final third of program	~25	~20	phone call

Research Expectations: At least one research project is required. One paper or presentation at annual research day or CAP is expected.

Areas to Improve Program: Curriculum update to emphasize the changes seen in the practice of pathology and better adapt to future changes.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Laboratory rotation Surgery : Anatomical Pathology, Hematopathology, other. Clinical rotations: Surgery. Clinical Hematology, Infectious Disease. Hematology Medicine.
- › **Other:** Exposure to Pathology in medical school. Background in community-based activity. Come for interview if requested.

University of Manitoba

Strengths: The centre for provincial consultations. Large amount of material in Surgical Pathology, Cytopathology, Autopsy. Provincial centre for Hematopathology/Molecular Pathology.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: 40 hours/week plus call time as scheduled, weekly Academic Half Day, conferences/rounds in regular schedule (mandatory and elective).

Research Expectations: One-year research elective available; otherwise, minimum of one presentation/year at departmental research day.

Areas to Improve Program: More subspecialty positions. More research funding.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Per student interest.
- › **Other:** Academic background. Displayed interest during medical school. Thoughtful personal letter.

University of Saskatchewan

Strengths: Broad experience in community Hospitals as well as University Hospital. Dedicated resident rooms at each hospital with good microscopes, computers) and new textbooks for residents and computer facilities. Small program facilitates much one on one teaching.

Other Key Features: We currently have a General Pathology program only, but plan to offer anatomic pathology in the future.

Common Clinical Encounters: Tumours. Bleeding disorders and anemias. Infectious disease. Diabetes and renal disease. Gynecological cytology, fine needle aspiration..

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	7-10	5-7	1-2
Second third of program	11-20	8-12	3-5
Final third of program	21-30	12-15	5-6

Research Expectations: RCPCSC mandates at least one major research project. We encourage case reports in PGY2 year and insist on a major research project in years three to four.

Areas to Improve Program: More participation in research, greater delegation of responsibilities, more exam preparation.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Family Medicine. Surgery. Obstetrics/Gynecology.
- › **Other:** Commitment to Pathology: research, electives. Commitment to Saskatchewan. Strong clinical background.

Programs Not Responding

University of Toronto

Queen's University - no longer offers program

McMaster University

University of British Columbia

3) Hematological Pathology

2010 Quota – Total Positions 2

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	–	–
McMaster University	–	–
Memorial University	–	–
Queen's University	–	–
Université de Montréal	–	–
Université de Sherbrooke	–	–
Université Laval	–	–
University of Alberta	1	–
University of British Columbia	1	–
University of Calgary	–	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	–	–
University of Saskatchewan	–	–
University of Toronto	–	–
University of Western Ontario	–	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Residency positions may be offered every second year for certain programs.

University of Alberta

Strengths: A comprehensive training program utilizing several hospital facilities, both large and small, within a single academic health region. Exposure to a large, internationally accredited region transfusion service providing blood products to patients at several hospitals and supporting extensive programs in cardiac surgery, transplantation and oncology. Opportunity for laboratory consultation at both large urban and small rural facilities. Extensive clinical and basic research opportunities. Opportunities for teaching of undergraduate, medical student and post-graduate trainees. Shared learning opportunities with residents in anatomic and general pathology, as well as adult and pediatric hematology.

Common Clinical Encounters: Each day we look at peripheral blood and bone marrow from a number of patients. The range of diagnoses that we make extends from iron deficiency and infectious mono to leukemia, lymphoma and myeloproliferative disorders. The patient samples that we see include both pediatric and adult patients from all clinical services.

We also diagnose inherited diseases like thalassemia and sickle cell anemia using microscope as well as by looking at electrophoresis and liquid chromatography of hemoglobin solutions.

In the course of the day we might consult with an intensivist or a surgeon to help them decide on appropriate coagulation tests to help diagnose and appropriately treat a bleeding or pre-operative patient, and with an internist or pediatrician to help interpret an abnormal test result.

We oversee blood bank testing and sort out the blood groups and products that should be given to patients where the testing is not straightforward, we consult with physicians regarding the best

blood products to use in various situations and we teach nurses, students and other doctors about blood product use and testing.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	4–7	3	1 week in 4
Second third of program	3–4	5	1 week in 4
Final third of program	1–3	7	1 week in 4

Research Expectations: The third year includes up to nine months of options of which up to six months may involve an approved research project.

Involvement in basic or clinical research throughout the years of the training program is strongly encouraged. Projects related to test validation and blood product use are always on going and resident involvement is encouraged.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Candidates should have an acceptable academic record and proven interest in hematological pathology, as demonstrated by electives in our specialty or related fields. Past experience in research would be helpful but is not essential.

We encourage applicants to have at least completed one elective in our specialty, preferably in our program

University of Ottawa

Strengths: A Program Director with a proven track record in Hematological Pathology and transfusion medicine research. An enthusiastic teaching staff. Excellent case material; the Ottawa Hospital is a tertiary-care referral centre, with a catchment area of 1 million.

Other Key Features: Hematological Pathology is very interesting and very rewarding.

Common Clinical Encounters: Patients presenting with high white count with acute leukemia. Patients presenting with low platelet count with diagnosis of TTP. Pre-op patients working up for coagulopathies with an elevated PTT (these are a variety of conditions — lupus inhibitors, factor deficiencies, etc.). Bone marrow examination for anemia — these turn out to be a variety of issues, including metastatic cancer, MDS, anemia of chronic disease, drug effects, etc. Bone marrow examination for staging of lymphoma and follow-up after therapy.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	90%	10%	
Second third of program	90%	10%	
Final third of program	70%	30%	

Research Expectations: Master's level, with residents taking on projects in their more senior years. Students have blocks of time available in their fourth year for completion of more involved projects.

Areas to Improve Program: More clinical teaching staff would be desirable.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Clinical Hematology and/or Internal Medicine electives. Hematological Pathology. Transfusion Medicine.
- › **Other:** Choose electives in Hematological Pathology. Maintain a good grade point average in medical school. Get involved in a research project in Hematological Pathology while in medical school.

University of Toronto

Strengths: Wide range of clinical material. Extensive range of technologies. Highly qualified teachers.

Other Key Features: Rotations in multiple hospital sites ensure exposure to a complete range of clinical material and laboratory technologies.

Common Clinical Encounters: Abnormal bone marrow specimens. Abnormal peripheral blood specimens. Abnormal flow cytometry profiles. Abnormal molecular profiles. Abnormal coagulation profiles.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	30	10	1/wk
Second third of program	30	10	1/wk
Final third of program	30	0	1/wk

Research Expectations: Opportunity for research during electives in the third year.

Areas to Improve Program: Increase exposure of medical students to Laboratory Hematology. Availability of extra one to two years for independent research.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Laboratory Hematology. Clinical Hematology. Laboratory Medicine.
- › **Other:** Elective in Laboratory Hematology. Knowledge and interest in Laboratory Medicine. Letter of reference from a laboratory position.

Programs Not Responding

Dalhousie University

University of British Columbia

4) Medical Biochemistry

2010 Quota – Total Positions 6

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	1	–
McMaster University	–	–
Memorial University	–	–
Queen's University	–	–
Université de Montréal	1	–
Université de Sherbrooke	–	–
Université Laval	2	–
University of Alberta	–	–
University of British Columbia	2	–
University of Calgary	–	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	–	–
University of Saskatchewan	–	–
University of Toronto	–	–
The University of Western Ontario	–	–
University of Western Ontario	–	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Residency positions may be offered every second year for certain programs.

Programs Not Responding

McGill University

University of British Columbia

Université de Montréal

Université Laval

Université de Sherbrooke

McMaster University

5) Medical Microbiology

2010 Quota – Total Positions 10

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	–	–
McMaster University	1	1
Memorial University	–	–
Queen's University	–	–
Université de Montréal	2	–
Université de Sherbrooke	2	–
Université Laval	2	–
University of Alberta	1	–
University of British Columbia	1	–
University of Calgary	–	–
University of Manitoba	–	–

<i>University of Ottawa/Université d'Ottawa</i>	–	–
<i>University of Saskatchewan</i>	–	–
<i>University of Toronto</i>	–	–
<i>University of Western Ontario</i>	1	–

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Residency positions may be offered every second year for certain programs.

University of Alberta

Strengths: 1.Excellent clinical volume with variety of complex cases 2.Excellent dedicated teaching faculty 3.Unique integration with the Provincial Laboratory for Public Health provides additional opportunities for the trainees 4.Very good integration with the Pediatric and Adult Infectious Diseases Programs 5.Excellent opportunities for electives for career development 6.Flexibility and collaborative nature of the Program.

Other Key Features: Medical Microbiology is a 5-year Program that includes 1 year of BCT, 2 Lab Core years (junior and senior), an advanced clinical year training in Infectious Diseases and other, and an elective year.

Common Clinical Encounters: The speciality of Medical Microbiology consists primarily of of four major spheres of activity: 1.Scientific and administrative direction of a clinical microbiology laboratory 2.Creation and direction of a hospital Infection control program 3.Provision of clinical consultations on the investigation, diagnosis, and treatment of patients suffering from Infectious Diseases. 4.Public health and communicable disease epidemiology and prevention.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>			
<i>Second third of program</i>			
<i>Final third of program</i>			

Research Expectations: At least one completed Research Project resulted in publication or presentation at the national or international conference.

Areas to Improve: Improving evaluation system

MEDICAL STUDENT TIPS

► **Useful Electives/Experience:** 1.Electives in Microbiology, Infectious Diseases, Public Health, Immunology 2.Research/ projects experience in any of the above areas.

► **Other:** N/A

University of Manitoba

Medical Microbiology is a branch of medicine concerned with knowledge relating to the prevention, diagnosis, and treatment of infectious diseases. The profession consists of 3 major spheres of activity: scientific and administrative direction of a clinical

microbiology laboratory, establishment and direction of a hospital infection control program, and provision of clinical consultations on the investigation, diagnosis, and treatment of patients suffering from infectious diseases.

Strengths: The Medical Microbiology Training Program at the University of Manitoba provides training to MDs wishing to pursue a career in Medical Microbiology. Training is offered as either a 5 year program following completion of medical school or a 3 year combined program with Infectious Diseases following a minimum of 3 years residency in either Internal Medicine or General Pediatrics. The Medical Microbiology Training Program at the University of Manitoba has several notable strengths:

1) Close integration with the Adult and Pediatric Infectious Diseases Training Programs – Trainees in Medical Microbiology work closely with trainees in Infectious Diseases. This includes overlap in Half-day teaching, clinical rounds, and other related activities (e.g. journal club). The integration of the 3 training programs fosters a good working relationship between the microbiology laboratory staff and clinicians.

2) Excellent, dedicated faculty.

3) Close proximity to the Canadian National Microbiology Laboratory (located in Winnipeg, Manitoba) – Trainees in Medical Microbiology rotate through the National Microbiology Laboratory. This rotation provides the trainee with exposure to national reference level diagnostic testing, as well as the opportunity to connect with national experts in various areas of microbiology.

4) Formal teaching. There are several formal teaching courses that are included in the Medical Microbiology curriculum at the University of Manitoba. These include a clinical bacteriology course and a mandatory epidemiology course.

Other Key Features: N/A

Common Clinical Encounters: Trainees are exposed to a wide range of clinical cases/pathology when on clinical infectious diseases rotations. Trainees receive experience managing common and uncommon bacterial and viral infections, as well as fungal, mycobacterial, and parasite infections. A continuity clinic is mandatory during training to provide exposure in the outpatient treatment of infectious diseases. Opportunities exist to manage immunocompromised patients (bone marrow transplant ward) and patients with HIV. Additionally, a specialty clinic block provides trainees a chance to manage patients with problems that are not usually handled on an in-patient basis (e.g. treatment of hepatitis C). There is no shortage of interesting/unique clinical cases in Manitoba and the wide range of pathology seen here is frequently remarked upon by rotating students/residents.

For laboratory training, trainees rotate through 2 large hospital based microbiology laboratories (Health Sciences Centre and St. Boniface Hospital), Cadham Provincial Laboratory, and the National Microbiology Laboratory. The different training sites have different areas of expertise, and by rotating through all sites the trainee is exposed to a broad range of microbiology diagnostic services (Bacteriology, Virology, Serology, Mycology, Mycobacteriology, Parasitology).

Workload 5 year program	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First year of program</i>	Rotating internship approximately 40-50 hours of clinical service a week (excluding call)	Reading around rotations/cases is expected. It is difficult to quantify the amount of time an individual resident will need to spend.	1 in 4 – may be in-house depending on the rotation
<i>Second, third, and fourth years of program</i>	Approximately 40 to 50 hours of clinical/lab work a week.	As for the first year, reading around cases/rotations is expected. There is some time during lab based rotations for reading/self-study.	In the 2nd to 4th years of the program, residents participate in the Infectious Diseases call schedule. The frequency of call is usually 1 in 4 and calls are taken from home.
<i>Final third of program</i>	Approximately 40 to 50 hours of clinical/lab work a week.	As for the first year, reading around cases/rotations is expected. There is some time during lab based rotations for reading/self-study.	Call is not mandatory in the final year of the program.

3 year program combined with infectious diseases

Workload 3 year program	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First year of program</i>	Approximately 40-50 hours of clinical service a week (excluding call)	Reading around cases/rotations is expected. There is some time during lab based rotations for reading/self-study.	Home call – frequency of 1 in 4
<i>Second, third of program</i>	Approximately 40-50 hours of clinical service a week (excluding call)	Reading around cases/rotations is expected. There is some time during lab based rotations for reading/self-study.	Home call – frequency of 1 in 4
<i>Final third of program</i>	Approximately 40-50 hours of clinical service a week (excluding call)	Reading around cases/rotations is expected. There is some time during lab based rotations for reading/self-study.	Call is not mandatory during the final year of the program

Research Expectations: Research is strongly encouraged and supported throughout the program.

Areas to Improve: Formal training in parasitology is a bit weak in the program at the moment. However, trainees are able to use elective time to improve their knowledge in this area. Previous trainees have attended a parasitology/tropical medicine course in Gorgas, Peru and this has been well reviewed.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Medical microbiology is a laboratory based specialty, although some medical microbiologists do clinical infectious diseases. Rotations through Infectious Diseases as a medical student would be useful to help a student decide whether Infectious Diseases/Microbiology is a career path that he or she might enjoy. Medical students considering Medical Microbiology at the University of Manitoba are encouraged to do an Infectious Diseases rotation at the University of Manitoba. During this rotation, they will have an opportunity to tour the microbiology laboratory and interact with the laboratory staff. Research in the field of microbiology or infectious diseases is also useful.
- › **Other:** For further information on training in Medical Microbiology at the University of Manitoba, please contact Dr. Andrew Walkty (Program Director) at HYPERLINK “mailto:AWalkty@mts.net”AWalkty@mts.net, or by phone at (204)-787-1161.

University of Ottawa

Strengths: Highly integrated with adult and pediatric Infectious Disease programs. Enthusiastic staff. Wide spectrum of common and uncommon pathogens and infectious disease patients.

Other Key Features: N/A

Common Clinical Encounters: Nosocomial pneumonia. HIV/AIDS. Surgical infections. Infections in immunocompromised host. Skin/soft tissue and bone infections.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50–60	10–20	As per PAIRO for clinical rotations
<i>Second third of program</i>	40–60	10–20	1 weekend/mo for lab rotations
<i>Final third of program</i>	40–60	20	1 weekend/mo for lab rotations

Research Expectations: Research projects are expected in each year of training, starting with PGY2 year.

Areas to Improve Program: Additional CaRMS positions.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Medical Microbiology. Infectious diseases. Any other medical specialty.
- › **Other:** Interest in Microbiology and Infectious Diseases. Strong laboratory skills. Strong clinical skills.

University of Toronto

Strengths: Large clinical service with large mix of patients. Large faculty with extensive clinical and research experience. Integrated research Close working relationship, seminars, teaching sessions, etc. with clinical infectious diseases service. Ample opportunities for community electives. Comprehensive rotation at Public Health Lab.

Other Key Features: N/A

Common Clinical Encounters: Postoperative infections. HIV-related infections. Bacteremias. Bone and bone structure infections. Immunocompromised host including complex transplant-related infections.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	As needed	2nd call
Second third of program	50	As needed	2nd call
Final third of program	50	As needed	Varies

Research Expectations: Start in first year and then carry on throughout training.

Areas to Improve Program: Increase number of residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Clinical consult service. Microbiology lab.
- › **Other:** Commitment. Electives. Research. References.

University of Western Ontario

Strengths: Flexibility. Personal contact with consultant. Research opportunities.

Other Key Features: This is a small program — often we have only one resident, and at the most, two residents in the program. This year (2007) we have four residents in the program.

Common Clinical Encounters: Infectious in ICU (ventilator-associated pneumonia). Sepsis in neutropenic patients; Infectious due to MRSA. Gram-negative bacteremia. Urinary Tract Infections.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	30%	30%	Only during clinical rotations
Second third of program	30%	30%	Only during clinical rotations
Final third of program	30%	30%	Only during clinical rotations

Research Expectations: Six months to a year.

Areas to Improve: Improve research opportunities in

Basic Microbiology; Recruitment of more physicians and microbiologists.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Medicine; Infectious Diseases (adults and/or pediatrics).
- › **Other:** Demonstrate interest in Laboratory Medicine, especially in Medical Microbiology; Clinical rotations in Medicine and Infectious Diseases; Demonstrated interest in research.

Programs Not Responding

Dalhousie University

McMaster University

Université de Montréal

Université de Sherbrooke

Université Laval

University of British Columbia

University of Western Ontario

6) Neuropathology

2010 Quota – Total Positions 4

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	–	–
McMaster University	–	–
Memorial University	–	–
Queen's University	–	–
Université de Montréal	1	–
Université de Sherbrooke	–	–
Université Laval	–	–
University of Alberta	–	–
University of British Columbia	2	–
University of Calgary	1	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	–	–
University of Saskatchewan	–	–
University of Toronto	–	–
University of Western Ontario	–	–

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Residency positions may be offered every second year for certain programs.

University of Calgary

Strengths: There are five neuropathologists practicing neuropathology at the University of Calgary. Four are primarily clinical neuropathologists and one also does bench research in neuro-oncology. Four are actively engaged in undergraduate/postgraduate teaching. There are presently three neuropathology trainees and a constant flux of neurology and neurosurgery trainees rotating through neuropathology. The workload comprises adult, pediatric and perinatal neuropathology including surgical material, autopsy material and peripheral nerve and muscle biopsies.

Other Key Features: Neurosciences are a major focus of the University of Calgary with a wide variety of bench and translational research providing exceptional opportunity for interaction amongst the various disciplines of the neurosciences.

Common Clinical Encounters: Service neuropathology, that is, the reporting of surgical biopsy specimens, muscle biopsies and autopsy results, provides for interaction with our clinical colleagues. Participation in and frequent presentation at clinical rounds provides for added participation.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	Anatomical Pathology; 40 hrs	Ad libitum	As per PAR; very limited call-back
<i>Second third of program</i>	Clinical Neuropathology; 40 hrs	Ad libitum	As per PAR; very limited call-back
<i>Final third of program</i>	Research and/or Clinical Neuropathology; 40 hrs	Ad libitum	As per PAR; very limited call-back

Research Expectations: None necessary as per Royal College Requirements but encouraged. Clinical research such as publication/conference presentation of interesting case studies/series expected.

Areas to Improve Program: New program director needs to more exactly delineate program procedures and day to day program proceedings.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Neuropathology, neurology, neurosurgery, neuro-radiology; pediatric neurology or other neuroscience related field.

› **Other:** N/A

University of Toronto

Strengths: All candidates have passed the exam in the past 10 years. Large number of qualified staff. Organized citywide teaching.

Other Key Features: Exposure to the entire range of neurological diseases as well as rare cases. Opportunity to do research if the candidate is so inclined.

Common Clinical Encounters: Brain tumours. Peripheral nerve.

Muscle disease. Pediatric brain diseases. Examples of every category of disease will be encountered during the five-year training.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	3 hr/day	Rest of time	Optional
<i>Second third of program</i>	3 hr/day	Rest of time	Optional
<i>Final third of program</i>	3 hr/day	Rest of time	Optional

Research Expectations: During the five years the candidate can write up case-related material and has the option of spending the entire elective year on research.

Areas to Improve Program: Resident numbers are too few — the program will be enhanced by increasing resident numbers.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Neuropathology. Any Neuroscience discipline, such as Neurology/Neurosurgery. Anatomical Pathology.

› **Other:** Have an academic record. Show interest in Neurosciences and Neuropathology in your letter. Do a Neuropathology or Neuroscience elective.

University of Western Ontario

Strengths: Teaching/mentorship. Case material: depth and breadth. Interdisciplinary learning (Neurosurgery, Neurology, Neuro-oncology, Neuroradiology).

Other Key Features: Three full-time faculty, one of the largest programs in Canada. All teaching material and teaching at one site. Resident interaction encouraged between NP, AP residents and Neural, Neurology residents. Academic half-day includes Clinical Neurological Science Rounds, unknown diagnostic slide sessions, and NP journal clubs. Monthly teaching rounds on NP with PowerPoint presentation. Resident participation in national conferences. Residents have won prizes for best presentations at CANP meetings. Four awards in five years. Laboratory service dedicated to NP diagnostics and training.

Common Clinical Encounters: Brain tumours. Dementia. Neuromuscular disease. Cerebrovascular disease. Trauma.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	10	1/3 (home call)
<i>Second third of program</i>	40	10	1/3 (home call)
<i>Final third of program</i>	40	10	1/3 (home call)

Research Expectations: None in first year.

Areas to Improve Program: More funding for improvement of physical space. More funding for fellowships in Neuropathology.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Pathology/Neuropathology. Neurology/neurosurgery/neuro-oncology. Neuroradiology.

› **Other:** Solid academic performance. Interview well. Show evidence of commitment to the specialty (through electives, etc.).

Programs Not Responding

University of British Columbia

University of Montreal

MEDICAL GENETICS

Description of Specialty

Medical Genetics is the specialty requiring in-depth knowledge of basic genetic principles and of genetic diseases as they affect all body systems. Medical geneticists must have a good understanding of the principles of genetic counseling. Frequently, the geneticists work collaboratively as part of multidisciplinary teams, providing expertise in diverse areas of medical genetics, including dysmorphology, inborn errors of metabolism, prenatal diagnosis, cancer genetics, teratology, developmental delay/mental retardation, and others. As well, the geneticist provides counseling services to the patient/family supportively when genetic conditions are diagnosed, and must inform referring practitioners about the implications, prognosis, and risks associated with the genetic disorder. Thus, geneticists must have excellent communication and counseling skills, as well as clinical, diagnostic, and technical skills. This specialty also has ample opportunity for clinical and laboratory research.

Overview of Program

All programs are five years in duration. Generally, the first two years of the program involve training in Pediatrics, Internal Medicine, Genetics, and Obstetrics. The third and fourth years are spent doing rotations in Clinical Genetics and laboratory work in Cytogenetics and Biochemical and Molecular Genetics. The final year of the program includes Clinical Genetics, research, or training in other areas. During all five years, the on-call is generally one in four, either in house or home.

CCMG (Canadian College of Medical Geneticists) and ABMG (American Board of Medical Genetics) certified fellowships:

- › Biochemical Genetics
- › Molecular Genetics
- › Cytogenetics

Post-doctoral training not recognized by the CCMG/ABMG:

- › Neurogenetics
- › Cancer Genetics
- › Skeletal Dysplasias

Note: Clinical Genetics and Clinical Biochemical Genetics are fellowship programs that can be undertaken after training in Pediatrics, Internal Medicine and OB/GYN.

2010 Quota – Total Positions 8

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	1	–
McMaster University	–	–
Memorial University	–	–
Queen's University	–	–
Université de Montréal	2	–
Université de Sherbrooke	–	–
Université Laval	–	–
University of Alberta	–	–
University of British Columbia	1	–
University of Calgary	1	–

University of Manitoba	1	–
University of Ottawa/Université d'Ottawa	1	1
University of Saskatchewan	–	–
University of Toronto	1	1
University of Western Ontario	–	–

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Residency positions may be offered every second year for certain programs.

McGill University

Strengths: Comprehensive coverage of all aspects of medical genetics. Mature program in a strong academic and clinical department. Integration of hospital and university components of the program.

Other Key Features: Strong in all aspects of medical genetics practice. Aims to train practicing geneticists. More than five years may be necessary to be a modern Medical Geneticist. We strongly encourage further training.

Common Clinical Encounters: Prenatal diagnosis of multiple diseases. Children with developmental abnormalities. Hereditary cancer. Inborn errors of metabolism. Neurogenic disease.

Workload	Call
First third of program	1 in 4
Second third of program	1 in 4
Final third of program	0

Research Expectations: One research year.

Areas to Improve Program: Aiming toward integrating all clinical activity at one site. Would like to recruit three additional Clinical Geneticists.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Medical Genetics (preferably at McGill). Internal Medicine. Pediatrics.
- › **Other:** Successful applicants must have at least one elective in Medical Genetics, have a basic understanding of the scope of Medical Genetics, and be enthusiastic and reliable.

University of Calgary

Strengths: Large number of residents for the specialty leads to “critical mass” for teaching and peer support. Varied patient population covering all aspects of clinical genetics. Full month of protected teaching per year (no clinical or ward responsibility).

Other Key Features: Largest and longest-standing RCPSC program in Medical Genetics. Staff enjoy teaching. Training opportunities include a longitudinal resident clinic, outreach clinics, and core month.

Common Clinical Encounters: Developmental delay/mental retardation. Multiple congenital anomalies. “At risk” pregnancies

(family history, teratogens, abnormal ultrasound). Inborn errors of metabolism. Personal/family history of cancer or other adult onset disease.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50-60	5	1:4 in house
Second third of program	40-50	10	1:4 home
Final third of program	5-60	10-20	1:4 home

Research Expectations: Up to six months is available in R4 or R5 year. At minimum, all residents are expected to publish at least one report and present at a national or international meeting.

Areas to Improve Program: Resident space issues have improved but dedicated office space would be ideal.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Medical Genetics, Pediatrics and its subspecialties. Internal Medicine and its subspecialties.

› **Other:** Candidates wishing to be successful should complete an elective in Medical Genetics, have a solid background in research (preferably in Genetics or allied field), and demonstrate a genuine interest in Medical Genetics. Strong communication and interpersonal skills are essential.

University of Manitoba

Strengths: Five Medical Geneticists with diverse areas of expertise. As a small program, residents are involved in all aspects of patient care relating to Medical Genetics and have lots of opportunities to care for many patients with a variety of genetic conditions.

Other Key Features: Small program that offers a very complete Medical Genetics training experience. Close working relationship between residents and staff. Work closely with other specialties (Obstetricians, Pediatricians, Internists, Radiologists, Oncologists, Pathologists, and more). Medical Genetics is the fastest growing field of medicine.

Common Clinical Encounters: Advanced maternal age or positive maternal serum screen. A child with multiple anomalies. A child with mental retardation. A woman with a strong family history of breast or ovarian cancer. An ill child or newborn with a suspected metabolic disorder.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1 in 4
Second third of program	50	10	1 in 4
Final third of program	50	10	1 in 4 home

Research Expectations: Six months.

Areas to Improve Program: A dedicated secretary to help with administration. More money for residents to attend conferences.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Medical Genetics, Fetal Assessment, Pediatrics.

› **Other:** Successful applicants must be familiar with what a Medical Geneticist does, obtain some prior exposure to a Medical Genetics unit. Prior coursework or research in Genetics is an asset but not mandatory.

University of Toronto

Strengths: Wide variety of clinical cases. Ample opportunity for clinical and laboratory research. Good cohort of trainees to provide a supportive community, and opportunities for mutual learning.

Other Key Features: Small specialty offered by a few centres in Canada. Make sure you ask questions about the differences between the programs, and their strengths and weaknesses, prior to making your decision about ranking.

Common Clinical Encounters: Newborn with one or more congenital anomalies. Child with developmental delay. Identification of an anomaly on prenatal ultrasound. Family history of concern (e.g., Huntington's disease, multiple miscarriages). Child/newborn with dysmorphic features — is this a syndrome?

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5-6	25/yr
Second third of program	50	5-6	Mostly home
Final third of program	50	5-10	Home

Research Expectations: One research year.

Areas to Improve Program: More staff. More space to house the trainees.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Medical Genetics. Any other clinical elective.

› **Other:** The successful applicant should know what the practice of Medical Genetics entails. Use an elective in Medical Genetics to demonstrate your interest (at any centre), and have good reference letters and a thoughtful personal letter.

Programs Not Responding

Université de Montréal

University of British Columbia

University of Ottawa

MILITARY FAMILY MEDICINE

Description of Specialty

Militi succurrimus, the motto of the medical military personnel in the Canadian Forces, translates to "Hasten to aid the soldier." Serving as a Medical Officer in the Canadian Forces, you will

come to realize the unique challenge of bringing these words to fruition. As a Medical Officer, you join a legacy of honourable service since 1885 that has been shared, and in part built, by a number of distinguished physicians, such as Dr. John McRae, Dr. Norman Bethune, and Sir Frederick Banting.

The Medical Officer works to provide medical support to the Canadian Forces and civilians during operational activities in a variety of environments. While in the field or on base, the Medical Officer strives to promote and maintain the health of military personnel through preventative medicine programs, the provision of care to the sick and injured, fitness testing and health screening, and the orchestration and execution of medical operational plans. Physicians in the military deliver care in a variety of circumstances, both on and beyond the battlefield, such as during UN peacekeeping missions or disaster relief operations. Medical Officers must be versatile and adaptive team players in order to successfully meet the demands of their career. In addition, Medical Officers must also hone a number of specialized clinical skills in the areas of Tropical Medicine, Aviation Medicine, and Diving Medicine.

Overview of Program

Facing the stark reality of graduating with an immense debt, the Canadian Forces' Medical Officer Training Plan (MOTP) has never been as attractive as it is for today's medical student. All Canadian medical students enrolled in any of the last three years of medical school are eligible candidates for the MOTP. The MOTP offers a legitimate way to significantly lessen the debt load incurred during medical training. Under the MOTP, students receive full government subsidy for tuition, student fees, medical and dental coverage, books, and equipment, along with a salary and guaranteed summer employment, provided the student is free of any academic commitments during the summer months. During their undergraduate education, MOTP students receive the distinct honour of being bestowed an officer's rank of Second Lieutenant, and subsequent promotion to Lieutenant on commencement of residency.

However, prospective students should recognize that recipients of MOTP sponsorship are obligated to serve four years as Medical Officers in the Canadian Forces following the successful completion of their medical education. A residency in Military Family Medicine differs little from the regular Family Medicine residency programs. All programs are two years in duration, with an optional PGY3 special-interest training year. The PGY1 and PGY2 years are typically comprised of core rotations in Obstetrics and Gynecology, Internal Medicine, Surgery, Pediatrics, Emergency Medicine, and Psychiatry (or Behavioural Science). A total of eight weeks of Rural Family Medicine is incorporated into the PGY1 and PGY2 Family Medicine rotations. Residents are also expected to fulfill requirements with respect to research, commonly in the form of a critical appraisal or quality assurance project. The areas available for additional training in the PGY3 year vary from school to school, and can include but are not limited to Emergency Medicine, Care for the Elderly, and Sports Medicine. Having acquired their medical training at civilian universities, MOTP students are required to attend a 13-week Basic Officer Training Course to fully prepare them for service and life in the Canadian Forces.

The Military Family Medicine program is different from the other CaRMS positions in the sense that the Department of National

Defence funds the applicant, not a position. The number of applicants funded varies from year to year and averages between 10 and 15 applicants nationally.

Dalhousie University — Halifax and Fredericton

See Family Medicine on p. 51.

Northern Ontario School of Medicine

See Rural Family Medicine on p. 55.

McGill University

See Family Medicine on p. 51.

McMaster University

See Family Medicine on p. 52.

Queen's University

See Family Medicine on p. 52.

University of Alberta

See Family Medicine on p. 53.

University of Calgary

See Family Medicine on p. 53.

Université de Montréal

See Family Medicine on p. 53.

Universite de Sherbrooke

See Family Medicine on p. 53.

Universite de Laval

See Family Medicine on p. 53.

University of Manitoba

Program did not respond.

University of Ottawa

See Family Medicine on p. 53.

University of Toronto and University of Toronto – Rural

See Family Medicine on p. 54 and Rural Family Medicine on p. 57.

University of Western Ontario London and Southwestern Sites

See Family Medicine on p. 54 and Rural Family Medicine on p. 57.

University of British Columbia – Rural Victoria

See Rural Family Medicine on p. 56.

NEUROLOGY (ADULT)

Description of Specialty

Neurologists diagnose and treat disorders of the brain, spinal cord, and peripheral nerves. Numerous primary and systemic diseases affect these systems, so neurologists treat patients at many stages of life, and for many types of illness. Neurological conditions can be chronic, debilitating, and painful, and include headache, carpal tunnel syndrome, seizure disorders, stroke, Parkinson's disease, multiple sclerosis, and Alzheimer's disease. Traditionally, Neurologists have relied heavily on their extensive repertoire of physical exam skills, but increasingly other diagnostic tools, such as CT/MRI, blood tests, electroencephalography, electromyography, and nerve conduction studies, play a role in daily practice. Neurology is an intellectually rigorous specialty, requiring problem-solving

skills and conceptual thinking. Some Neurologists see patients primarily on a consultative basis, while others provide ongoing care for patients with chronic conditions. Most Neurologists report a high degree of autonomy, responsibility, and satisfaction.

Overview of Program

All Adult Neurology programs are five years in duration and conform to the requirements set out by the Royal College of Physicians and Surgeons of Canada. These requirements include at least one year of training (preferably two years) in Internal Medicine (usually carried out in the PGY1 and/or PGY2 year(s)), and at least three years of training in Neurology. These three years (usually the PGY3 to PGY5 years) must include 1) at least 24 months of Clinical Neurology, of which a minimum of 18 months in Adult Neurology, and a minimum of three months in Pediatric Neurology, and 2) one year of clinical or basic science research, or other training directly related to the field of Neurology.

Fellowships offered without Royal College status:

- › Behavioural Neurology
- › Epilepsy
- › Headache/pain
- › Movement Disorders
- › Multiple Sclerosis
- › Neuromuscular Disease
- › Neuro-oncology
- › Neuro-ophthalmology
- › Sleep
- › Stroke

2010 Quota – Total Positions 42

	Quota	IMG Quota
<i>Dalhousie University</i>	1	–
<i>McGill University</i>	4	–
<i>McMaster University</i>	1	1
<i>Memorial University</i>	1	–
<i>Queen's University</i>	1	–
<i>Université de Montréal</i>	5	–
<i>Université de Sherbrooke</i>	3	–
<i>Université Laval</i>	3	–
<i>University of Alberta</i>	1	–
<i>University of British Columbia</i>	5	–
<i>University of Calgary</i>	3	–
<i>University of Manitoba</i>	2	–
<i>University of Ottawa/Université d'Ottawa</i>	2	1
<i>University of Saskatchewan</i>	2	–
<i>University of Toronto</i>	5	2
<i>University of Western Ontario</i>	3	1

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strength: Outstanding clinical teachers; excellent clinical material; well developed subspecialty programs; funded annually conference/travel.

Other Key Features: 1st year: 48 weeks of internal medicine including 8 weeks of neurology.
 2nd year: “Basic clinical year” with broad range of rotations including neuro-ophthalmology, neuroradiology, PMR, psychiatry, CCU, neurosurgery.
 3rd and 4th years: 12 months of general clinical neurology (inpatient ward, consultations and clinics) and 12 months of specialties (3 months each of EEG/epilepsy, EMG/neuromuscular, pediatric neurology and neuropathology).
 5th year: 6 months of electives and 6 months of ambulatory clinics. Starting with PGY 2 year, residents have the option of doing 4 week electives each year.

Common Clinical Encounters: Stroke, epilepsy, headache, coma, myelopathy, cranial nerve disorders, vestibular dysfunction, dementia, movement disorders, and a variety of common neurological symptoms.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40-50	5-10	1 in 4/5
Second third of program	40-50	5-10	1 in 4/6
Final third of program	40-50	10-20	1 in 4/6

Note: Generally no call in last 6 months.

Research Expectations: Residents are expected to be involved in a research project; there is flexibility as to the size of the project ranging from case report to small chart review to a full prospective project. Research mentorship is available with a full-time person dedicated to this role.

Areas to Improve Program: Implement longitudinal clinics in general neurology.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Desirable to have at least two electives in neurology. An elective at Dalhousie program is highly recommended. Commitment to neurology.
- › **Other:** Outstanding reference letters. Reference letter from a Dalhousie neurology faculty is desirable. Interview here in person is highly recommended.

Memorial University of Newfoundland

Strengths: Small closely knit group with good exposure to clinical neurology. Graded responsibility for residents. Manageable call schedule.

Other Key Features: Exposure to interesting genetic disorders.

Common Clinical Encounters: Stroke, headache, MS, epilepsy, movement disorders, nerve and muscle disorders, botox treatment.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	5	5	7/month
Second third of program	10	5	5/month
Final third of program	10	10	4/month

Research Expectations: Research encouraged if so desired. Not mandatory.

Areas to Improve Program: Increasing resident and staff members with future subspecialty representation in stroke.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** We encourage well rounded individuals.

University of Alberta

Strengths: Exposure to inpatient Neurology service in PGY1. Flexible program with well-balanced elective time.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: N/A

Research Expectations: All residents must undertake basic or clinical neuroscience research in PGY3-5.

Areas to Improve Program: Increase residency spots.

University of British Columbia

Strengths: Excellent facilities and patient base. Comprehensive resources include large academic Pediatric service, MS clinic, Movement Disorder clinic, Alzheimer clinic, Stroke Prevention clinic, and AIDS service. High-volume Neurosurgery, Neuroradiology, Neuro-ophthalmology, Epilepsy, Neuromuscular, and Headache services.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: N/A

Research Expectations: Residents must complete a research project in training.

Areas to Improve Program: N/A

University of Calgary

Strengths: Large contingent of general and subspecialty Neurologists within a combined Neurology/Neurosurgery department. Clinical Neurology training blocks comprise 25% outpatient clinics and 25% inpatient consultations. New facilities with further expansion in progress.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: N/A

Research Expectations: Residents are encouraged to perform clinical or basic research; expected to publish and present.

Areas to Improve Program: Increase residency spots.

Université Laval

Strengths: Our program provide an excellent clinical exposure, with all major neurology subspecialties represented. Moreover, almost all the rotations, except the pediatric neurology one, are in the same center (Hôpital de l'Enfant-Jésus), which helps to increase the contact possibility between residents and neurologists. The neurology department is also well supported by other key services (neurosurgery, neuroradiology, neuropathology, intensive care).

A neurology course, covering all the aspects of neurology over a two years period for a neurology resident, is being created. There is major opportunity in research for the concerned resident, especially in neurogenetic.

Other Key Features: The l'Enfant-Jésus hospital is a level one trauma center, with the largest emergency room and intensive care unit outside of Montreal in the province of Quebec

Common Clinical Encounters: All the major pathology in neurology are well represented, with special clinics and neurologists involved in all major neurology subspecialty (vascular, memory, movement disorder, epilepsy, multiple sclerosis, headache, pediatric neurology, genetic, neurointensive care).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	Five full days (workload is different between rotations), 40 hrs/wk on average	8-10	4-5 days a month
<i>Second third of program</i>	Five full days (workload is different between rotations), 40 hrs/wk on average	8-10	4-5 days a month
<i>Final third of program</i>	Five full days (workload is different between rotations), 40 hrs/wk on average, with the possibility of less workload between Christmas and the final exams on year five	20 during year five	4-5 days a month (no week-end call before the final exam on year five)

Research Expectations: All residents are encouraged to present their work at least one time during their residency at a major congress.

Areas to Improve Program: The course program (by formal presentations) is being improved actually.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Neuropathology, neurology, neurosurgery, neuro-radiology; pediatric neurology or other neuroscience related field.

› **Other:** N/A

University of Saskatchewan

Strengths: Good faculty–student interactions. Strong group of residents. Structured teaching curriculum. Continuity of care clinic for PGY-3 and higher residents. Opportunity to attend national meetings and other courses for residents on a regular basis.

Other Key Features: Outpatient clinic time (one 4-week block) in first year and clinic time throughout the program.

Common Clinical Encounters: Stroke, seizure, headache, MS, neuromuscular disorders, dementia, movement disorders.

Workload	Clinic (hrs/wk)	Call
<i>First third of program</i>	–	Max. 1:3 (usually 1:4 or better)
<i>Second third of program</i>	On average at least 2	1:4 or better
<i>Final third of program</i>	On average at least 2	1:5 or better

Resident-to-Clinical Teacher Ratio: 1:8

Research Expectations: PGY-1 through PGY-4 do research projects including case report, quality assurance project, and case series or clinical trial.

Areas to Improve Program: Need more faculty (though this is improving). Increase residency positions.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Useful electives for Neurology residents include Internal Medicine, Emergency, Radiology, Neurosurgery and Neurology. One does not have to do an elective at U of S to be ranked here, but must demonstrate an interest in Neurology by doing at least one elective (total at least four weeks in duration).

University of Toronto

Number of Reference Letters and Due Date: Three letters. Due date determined by CaRMS.

Personal Letter Information and Due Date: See CaRMS for details.

Strengths: Largest training program in Canada (37 residents currently). Over 50 full-time faculty representing all Neurology subspecialties. Integrated clinical and basic science training. Elective and research opportunities.

Other Key Features: 1) Direct entry five-year training program. 2) First two years of training cover general internal medicine and subspecialties, Neurosurgery, Intensive care, Neuroradiology and electives. 3) Year three: 12 months Adult Neurology. Year four: Pediatric Neurology, Neuropathology Research/electives/Neurophysiology. Year five: Adult clinical neurology/electives.

Common Clinical Encounters: 1) In-patient, ambulatory and

Emergency Room assessment of patients with neurological symptoms, not yet diagnosed. 2) Management of patients in the same settings with previously diagnosed neurological conditions, requiring further assessment and management (e.g., stroke, dementia, movement disorders, multiple sclerosis, neuropathy, epilepsy, neuro-oncology, headache, etc.). 3) Training in specialized neurological diagnoses. 4) Assessment and management of patients referred for tertiary care in subspecialty areas of neurology.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	N/A	10-15 hours	1/6
Second third of program	N/A	10-15 hours	1/6
Final third of program	N/A	10-15 hours	1/6

Research Expectations: All residents are expected to complete a research project in the PGY4 year. There are many opportunities to participate in research projects with the Neurology faculty, pursue graduate degrees, or enter the Clinical Investigator Program.

Areas to Improve Program: 1) Further use of information technology. 2) Quality improvement.

MEDICAL STUDENT TIPS

► **Useful Electives/Experience:** Numerous electives are available involving ambulatory and in-patient neurology experiences at the University Health Network/Mt. Sinai, St. Michael's Hospital, Sunnybrook Health Sciences Centre and Baycrest. Summer research opportunities are also available.

► **Other:** N/A

Programs Not Responding

McGill University

McMaster University

Université de Montréal

Université de Sherbrooke

University of Ottawa

University of Western Ontario

University of Manitoba

NEUROLOGY (PEDIATRIC)

Description of Specialty

See Neurology (Adult).

Overview of Program

All programs in Pediatric Neurology are five years in duration, and are designed to meet the requirements set forth by the Royal College of Physicians and Surgeons in Canada. In general, these include one year of basic clinical training, a minimum of one year of Pediatrics, and a minimum of three years in Neurology. The Neurology component must include a minimum of 24 months

in Clinical Neurology, with at least 12 months in Pediatric Neurology and six months in Adult Neurology; and one further year of clinical or basic science research, basic science study, clinical training, or other training pertinent to Neurology.

2010 Quota – Total Positions 11

	Quota	IMG Quota
Dalhousie University	–	–
McGill University	2	–
McMaster University	1	1
Memorial University	–	–
Queen's University	–	–
Université de Montréal	1	–
Université de Sherbrooke	–	–
Université Laval	–	–
University of Alberta	1	–
University of British Columbia	3	–
University of Calgary	1	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	1	–
University of Saskatchewan	–	–
University of Toronto	1	1
University of Western Ontario	–	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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McGill University

Strengths: Large program (large number of trainees). Exposure to large variety of pediatric neurological problems. Extremely active Neuroscience program.

Other Key Features: Diverse group of trainees. Exposure to a large variety of clinical problems. Neuroscience exposure. Situated in lovely Montreal — an opportunity to learn French.

Common Clinical Encounters: Acute stroke, epilepsy, neuromuscular disorders, multiple sclerosis, movement disorders.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5-10	1 in 4 (mainly from home)
Second third of program	50	5-10	1 in 4 (mainly from home)
Final third of program	50	10-20	1 in 4 (except two when on clinical service months before Royal College exams)

Research Expectations: At least six months, usually in PGY4.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

► **Useful Electives/Experience:** Neurology. Neurosurgery. Psychiatry/Ophthalmology.

- › **Other:** Do elective in Neurology where you wish to apply. Demonstrate clear interest in Neurology and Neuroscience in your application. Clinical or basic research projects in Neurology/Neuroscience.

McMaster University

Strengths:

- › Small lifestyle friendly program
- › Unique strong neuroscience and neuroanatomy training component
- › Exposure to both General Pediatric Neurology and Subspecialty Pediatric Neurology
- › Problem-based academic half-days

Other Key Features:

- › One of the largest neonatal units in Canada
- › State of the art Neuromuscular Facility

Common Clinical Encounters:

- › Epilepsy
- › Headache
- › Developmental Delay
- › Cerebral Palsy
- › Hypoxic Ischemic Encephalopathy
- › Hypotonic Infant
- › Mitochondrial Disease

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	3-10 hours	N/A	Home Call 1 in 5
<i>Second third of program</i>	3-10 hours	N/A	Home Call 1 in 5
<i>Final third of program</i>	3-10 hours	N/A	Home Call 1 in 5 (no call final 6m)

Research Expectations:

- › Must submit one article for publication by end of training
- › Provided with ½ day on alternate weeks, plus 4 weeks per year (after 2nd year) for research
- › Research methodology course in PGY2

Areas to Improve Program:

- Young program - accredited in 2009 - no one has completed the program at this point

MEDICAL STUDENT TIPS

› Useful Electives/Experience:

- Pediatric Neurology Elective
- General Pediatrics Elective
- Adult Neurology Elective
- Radiology Elective

- › **Other:** N/A

Université de Montréal

Strengths: Excellent service to education ratio in all contexts. Dynamic and involved teachers. Excellent variety of clinical experience in outpatient and inpatient consultative service. The resident benefits from a structured adult and pediatric teaching program.

Other Key Features: Research opportunities and support for the resident. Epidemiology course horizontal based offered to R2 residents, which has received excellent feedback. Frequent feedback and evaluations since small program. High ratio of professors to resident.

Common Clinical Encounters: Developmental delay, cerebral palsy, learning disabilities, epilepsy, headache, congenital cerebral malformations, hypoxic-ischemic encephalopathy, muscular dystrophy, metabolic diseases, genetic syndromes.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First fifth of program</i>	40-45	4	1 in 4
<i>Second fifth of program</i>	40-45	6	1 in 4
<i>Third fifth of program</i>	40-45	6	1 in 4
<i>Fourth fifth of program</i>	40-45	6	1 in 4
<i>Final fifth of program</i>	40-45	8	1 in 4 for 1st 6 months only

Research Expectations: Residents are encouraged to participate in a clinical or basic science research project. Most residents complete a research project in a field of their interest. This is begun between the second and third year of the residency program. Some ultimately go on to complete a Master's after the third year of training.

Areas to Improve Program: The program has had significant improvements in the last four years, notably a direct admission policy with one residency position available per year. The program has become totally compliant with the Royal College CANMEDS project. The last area of improvement is in education methods of the CANMEDS role.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** An elective in Adult or Pediatric Neurology or both may be useful. Experience treating or working with children or multidisciplinary setting is also useful.
- › **Other:** Strong performance in interview especially for the three clinical scenarios. Strong letters of reference and curriculum vitae.

University of Alberta

Number of Reference Letters and Due Date: Three letters of reference are required. Most students apply through the Canadian Residency Matching Service (CaRMS) and we adhere to the assigned due dates. April 30 is the general due date for the documents of candidates applying outside of CaRMS (i.e., Pediatric residents interested in subspecialty training in Pediatric

Neurology) if interested in starting in July of the same year.

Strengths: Growing clinical program with multiple areas of expertise, including epilepsy, neuromuscular disorder, headache, stroke, and neonatal neurology. Strong emphasis on developing an academic career and research interests.

Other Key Features: We are focused on training talented, ambitious people to perform with excellence as consultant Pediatric Neurologists. In addition, we hope to foster subspecialty interests for trainees, whether it be research, a clinical subspecialty, or enhanced skills as an Academic General Pediatric Neurologist. We also strive to develop skills for lifelong learning, professionalism, ethical practice, and critical appraisal. The program is flexible, based on the trainee's interests, with a strong emphasis on education over service. All major subspecialty areas are represented, and the patient volume and variety will ensure excellent exposure to all major problems in Pediatric Neurology.

Common Clinical Encounters: Migraine. Epilepsy. Movement disorders (e.g., dystonia, chorea). Neurocutaneous disorders (e.g., neurofibromatosis, tuberous sclerosis). Stroke, cerebral palsy, and neuromuscular disorders.

Workload: Hospital/clinical work: 40 to 50 hours/week; Afterhours reading: 10 to 15 hours/week; On-call: 1 in 4 at-home call in the last three years of training. In the first two years, call is in-house in General Pediatrics.

Research Expectations: There is a three-month mandatory research block within the program, as well as the opportunity to extend research time to a total of six months. Clinical research is given priority, but laboratory projects are acceptable based on the trainee's interests. Research is usually done in the last three years of the training program.

Areas to Improve Program: We are continuing to improve the teaching for Neurology residents and are in the process of developing a Research Curriculum that will introduce clinical research concepts and study design.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Neurology (Adult or Pediatric). Neurosurgery (Adult or Pediatric). General or Subspecialty Pediatrics.
- › **Other:** Be gentle and conscientious with children. Have a strong interest in the Neurosciences (through clinical electives, research experience, or past employment). Research experience and publications are definite assets.

University of British Columbia

Strengths: Excellent facilities and patient base. Early exposure to Clinical Neurology. Flexibility in rotation schedule.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: N/A

Research Expectations: Two research projects are required, one

in PGY1 to 2 and the second in PGY3 to 5.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** N/A
- › **Other:** N/A

University of Calgary

Strengths: Supportive, knowledgeable staff. Commitment to education. Strength of supporting programs (Pediatrics, Clinical Neurosciences).

Other Key Features: Interested candidates can apply either through CaRMS for a PGY1 residency position, or after completing three years in Pediatrics by applying through the Alberta Children's Hospital Foundation for a Fellowship training position.

Common Clinical Encounters: Developmental delay, seizures/epilepsy, headaches, acquired brain injury, motor weakness.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5	30-40
Second third of program	40	10	10-20
Final third of program	40	10	10-20

Research Expectations: Residents are given research training and elective time to complete one or more research projects during their training.

Areas to Improve Program: Recruitment of more Pediatric Neurology staff (in progress).

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Pediatric Neurology, Pediatrics, Adult Neurology.
- › **Other:** Arrange an elective in Pediatric Neurology. Have research experience related to clinical or basic Neurosciences. Be excited about and committed to caring for children with neurological disorders.

University of Toronto

Strengths: Diverse faculty with expertise in all areas of Neurology. Excellent, structured educational activities. Busy clinical service.

Other Key Features: This is a five-year program, with the fourth year an elective year when the resident can do research, pursue further education (e.g., Master's in Clinical Epidemiology), or do further clinical work.

Common Clinical Encounters: Epilepsy, neuromuscular disorders, headache, ADHD, Tic disorders, and other general Neurology. CNS-related infections, developmental delay of various etiologies.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
Second third of program	40	10	10
Final third of program	40	10	10

Research Expectations: Each year, the resident is involved in a clinical or basic science research project.

Areas to Improve Program: Increased exposure to Ambulatory Pediatric Neurology. Increased protected research time.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Pediatric Neurology, Adult Neurology, General Pediatrics.
- › **Other:** Elective in Pediatric Neurology. Research experience in a related field. An elective in General Pediatrics.

Programs Not Responding

University of Ottawa

NEUROSURGERY

Description of Specialty

Neurosurgery is a demanding specialty involving the diagnosis and treatment of diseases affecting the nervous system and related structures. In addition to having a firm understanding of general surgical practices, including the management of shock, fluid and electrolyte disturbances, vasculopathy and sepsis, and the appropriate pharmacological treatment of these conditions, Neurosurgeons must possess extensive knowledge in Neuroanatomy, Neurophysiology, Neuroradiology, Neuropsychology, and Clinical Neurology. Moreover, Neurosurgeons must possess highly developed technical skills when approaching the surgical treatment of neurological disease, which can involve a variety of microsurgical and stereotactic techniques. Neurosurgeons assess patients in office, conduct surgery, and manage the in-hospital care of their patients.

Overview of Program

In accordance with the requirements of the Royal College of Physicians and Surgeons of Canada, all programs in Neurosurgery take a minimum of six years to complete. During PGY1 and 2, residents complete core training in surgery where they acquire the knowledge, skills, and attitudes underlying basic surgical practices as preparation for further training. Starting in PGY3 through PGY6, residents complete three years of approved training in Neurosurgery, including one year of senior residency, and up to six months of Pediatric Neurosurgery. One year of training must include three months of residency in Neurology and three months of residency in Neuropathology. Most programs also permit or require residents to spend at least one year conducting clinical or basic science research relevant to the objectives of the specialty and acceptable to the director of the training program.

Fellowships offered without Royal College status:

- › Brain Tumors
- › Cerebrovascular Surgery
- › Epilepsy Surgery
- › Facial Pain
- › Gamma Knife Radiosurgery

- › Movement Disorders
- › Neurotology
- › Pediatric Neurosurgery
- › Peripheral Nerve Surgery
- › Skull Base Surgery
- › Spine Surgery

2010 Quota – Total Positions 20

	Quota	IMG Quota
Dalhousie University	1	–
McGill University	1	–
McMaster University	1	–
Memorial University	–	–
Université de Montréal	1	–
Université de Sherbrooke	2	–
Université Laval	1	–
Queen's University	–	–
University of Alberta	1	–
University of British Columbia	2	–
University of Calgary	2	–
University of Manitoba	1	–
University of Ottawa/Université d'Ottawa	–	–
University of Saskatchewan	1	–
University of Toronto	4	1
University of Western Ontario	2	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: A balanced group of committed Clinical and Academic Neurosurgeons dedicated to clinical service, research, and teaching. A large number of all types of neurosurgical cases that provide a wealth of neurosurgical experience for the trainee. A well-structured formal teaching program with regular Neurosurgery rounds, multidisciplinary rounds, and formal lectures provided for resident teaching.

Other Key Features: We have a well-balanced group of committed Clinical and Academic Neurosurgeons, a large number of all types of Neurosurgical cases, a well-structured formal teaching program, a balanced service-to-educational ratio for residents, and a thriving world-class research environment.

Common Clinical Encounters: Tumours of the brain and spine, trauma, subarachnoid hemorrhage, epilepsy, hydrocephalus, epilepsy surgery, cerebrovascular surgery.

Workload: The work to education ratio is quite favourable; with ample clinical experience to ensure mastery of neurosurgical knowledge and techniques.

Research Expectations: Residents are provided an opportunity to complete up to 9 months of clinical or basic research most commonly during the fourth year two year of the program. The timing and type of research is decided on an individual basis. Neurosurgery also provides the opportunity for trainees to participate in the Royal College of Physicians and Surgeons

Clinician Investigators Program, which has potential for Masters or doctorate-level training opportunities.

Areas to Improve Program: Through activity of the Brain Repair Centre and the Division of Neurosurgery, residents now have access to state-of-the-art clinical and research facilities.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Neurosurgery at Dalhousie. Neurosurgery at other academic centres. Other surgical rotations.
- ▶ **Other:** Commitment to Neurosurgery. A well-balanced lifestyle. Excellent academic record.

McGill University

Strengths: Broad knowledge of all neurosurgical specialties. Academic half day teaching activities. Practice exams (oral and written).

Other Key Features: We have six services, namely Neurotrauma, Pediatrics, Epilepsy & Functional, Cerebrovascular, Oncology, and Spine Instrumentation and Peripheral Nerve.

Common Clinical Encounters: Epilepsy. Vascular (aneurysms). Oncology (brain, spinal cord, and nerve tumours). Functional (Parkinson's, pain). Pediatrics.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40–45	Varies	9/mo
<i>Second third of program</i>	40–45	Varies	9/mo
<i>Final third of program</i>	40–45	Varies	9/mo

Research Expectations: None in 1st year. Depends on the residents. Many have chosen either a Master's degree or a Ph.D.

Areas to Improve Program: Increase numbers of carotid surgeries. Increase exposure to spinal cord trauma.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Epilepsy. Pediatrics. Spinal and Peripheral Nerves.
- ▶ **Other:** Elective in Neurosurgery at McGill University. Interest in Neurosurgery.

University of Calgary

Strengths: Excellent volume of neurosurgical cases. Excellent teaching rounds and conferences. Research opportunities with surgeon scientists or basic science researchers. Diverse faculty, with subspecialty interest in all aspects of contemporary Adult and Pediatric Neurosurgery.

Other Key Features: We have a small program with a very collegial atmosphere, and excellent relationships with our colleagues in Neurology, Neuroradiology, Neuropathology, Rehabilitation Medicine, and Basic Neuroscience.

Common Clinical Encounters: Head trauma. Brain tumours. Degenerative spinal disorders. Spinal injury. Intracranial

hemorrhage.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	60	4	1 in 4
<i>Second third of program</i>	60	6	1 in 4
<i>Final third of program</i>	60	8	1 in 4

Resident-to-Clinical Teacher Ratio: Twelve residents to 14 faculty.

Research Expectations: Involvement in various clinical research projects throughout residency training. One year of dedicated research mandatory during PGY-4 year (minimum requirement). Residents encouraged to spend more than one year however, working toward a Masters or Ph.D.

Areas to Improve Program: Development of a surgical skills laboratory. Development of simulated patients for teaching/assessing communication skills.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Neurosurgery.
- ▶ **Other:** Be motivated. Understand the demands of the specialty. Be able to cope with stress.

University of Manitoba

Strengths: Offers full range of neurosurgical subspecialty care including vascular, pediatric, spine, functional and epilepsy. Has Canada's busiest radiosurgery/Gamma knife program. Also has excellent cranial nerve disorders centre.

Other Key Features: Soon to obtain intraoperative MRI.

Common Clinical Encounters: Cerebral aneurysms, primary and secondary brain tumours, microvascular compression syndromes, pediatric neurosurgery, epilepsy surgery, functional/movement disorder surgery, complex and minimally invasive spine surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	8	3–10	1 in 4
<i>Second third of program</i>	8	3–10	1 in 4
<i>Final third of program</i>	8	>10	1 in 4

Research Expectations: Optional research year, which can be extended to obtain MSc, PhD. All residents expected to have ongoing research project.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Neurosurgery, Neurology, Neuroradiology.

University of Ottawa

Number of Reference Letters and Due Date: Three, due on application.

Personal Letter Information and Due Date: Ad lib, due on

application.

Strengths: Small, cohesive program based at two sites — one adult and one pediatric. High volume of Clinical (especially operative) cases. Outstanding operative experience. Ability to tailor program to individual resident needs: balance between Research/Clinical, Academic/Community, etc.

Other Key Features: This is a very good program with an excellent record of previous success in training the best Neurosurgeons.

Common Clinical Encounters: Brain tumours. Degenerative spine problems. Spine/spinal cord trauma. Traumatic brain injury. Cerebral vascular disorders. Peripheral Nerve Surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	33	7	1 in 4
Second third of program	33	7	1 in 4
Final third of program	35	5	1 in 3

Research Expectations: Doctorate or higher in first or second third of program.

Areas to Improve Program: Increase number of clinical skills lab sessions. Support more resident research.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Neurosurgery. General Surgery. Neurology.
- › **Other:** Have a well-rounded resume, including extracurricular. Electives in Neurosurgery. Have great reference letters.

University of Saskatchewan

Strengths: A small program with dedicated full-time faculty that allows a more relaxed and collegial academic environment. Regular academic rounds includes a protected “half day” which is actually almost a full day. Residents have a strong voice in the structure and content of the program. Masters and PhD programs available.

Other Key Features: Neurosurgery in Saskatoon including pediatric neurosurgery is located at one site (Royal University Hospital). There is no “cross coverage” for other hospitals. Pediatrics and spine are integrated into the program (not separate rotations). Early hands-on experience in the operating room. See our website for more information: <http://www.medicine.usask.ca/surgery/divisions/neurosurgery/>

Common Clinical Encounters: All aspects of neurosurgical practice are encountered including oncology, pediatrics, skull base surgery, vascular, endovascular, epilepsy, functional and complex spinal disorders, peripheral nerve and trauma.

Research Expectations: From PGY3 onward, yearly presentation at Resident Research Days is highly encouraged. We have a very good publishing record (see our website for list of publications).

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Neurosurgery at the University of Saskatchewan or elsewhere.

University of Toronto

Strengths: Education-driven. Greatest academic training potential in Canada. Largest and most varied neurosurgery training program in North America.

Other Key Features: Very different from all other Canadian programs, with a rotation among hospitals that can challenge those seeking the individual mentorship that is readily obtained in smaller, single-hospital programs. The faculty is of a quality unparalleled in Canada. There is a real potential to be exposed to critical thinkers in Neurosurgery during your training. Research opportunities and support that is truly unique. Ideal for the energetic individual who wants to be challenged during postgraduate training.

Common Clinical Encounters: Closed head injury +/- multiple trauma. New presentation of an intracranial tumour. Subarachnoid hemorrhage. Paralysis secondary to spinal cord compression. Coma of undetermined origin.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	70	lots	1 in 4
Second third of program	70	lots	1 in 4
Final third of program	70	> above	1 in 3

Research Expectations: Residents are selected for their academic career goals in Neurosurgery. All residents are expected to take two to five years, usually after three years of clinical training, to obtain an advanced degree (M.Sc. or Ph.D.) through the Surgeon Scientist Program in the Department of Surgery. The subject varies from basic science research to Clinical Epidemiology to Education Research.

Areas to Improve Program: Improve faculty teaching skills. Improve resident learning skills.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** An elective in Toronto to ensure that the applicant understands the nature of neurosurgical training in Toronto. An elective at another neurosurgical program at a Canadian university. A clinical elective in which the supervisor has close contact with the applicant and can write a meaningful evaluation of the candidate's clinical performance. This can be a neurosurgical elective but does not have to be.
- › **Other:** Get good marks, work hard. Be sure, through experience, that Neurosurgery is what you want. Make your decision well before the CaRMS application date, so that your attitude and elective experience will reflect your decision.

University of Western Ontario

Strengths: Excellent operative and technical teaching, with wide and early operative exposure. All areas of Neurosurgery covered (epilepsy, vascular, spine, neuro-oncology, pediatrics, pain/functional). Strong support and interaction with staff.

Other Key Features: UWO has one of the highest operative caseloads for a program of its size. Residents start hands-on experience early, and chief residents are expected to function at the level of a junior consultant. The Neurosurgery division has an excellent relationship with Neurology, Neuropathology, and Neuroradiology, making for good education experiences through collaborative rounds and joint teaching sessions, and facilitating referrals and case management.

Common Clinical Encounters: Brain tumours. Spinal degenerative disease (cervical spondylosis, lumbar stenosis, disc herniation). Head/neck trauma (chronic subdurals, spinal fractures, closed head injury). Carotid atherosclerosis. Subarachnoid hemorrhage.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	80	10	20
Second third of program	80	5	20
Final third of program	90	20	10

Research Expectations: None in 1st year. Residents are encouraged to undertake projects and present them. Up to one year of funded time is available for research. Some residents have taken up to four years away from the program to complete a Ph.D., while others have used their research/elective time to undertake additional clinical electives. Our program supports personal career goals, whether they include research or not.

Areas to Improve Program: Site consolidation. Currently, the trauma centre is located in a hospital other than the Neurosurgery service, making coverage of multiple trauma patients challenging. Eventually, the hospital housing the trauma unit will close, merging Neurosurgery and the trauma unit at a single site, improving patient care and educational exposure to polytrauma patients.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Neurosurgery. Neurology. Critical Care.
- › **Other:** Demonstrate a true commitment to Neurosurgery by undertaking a variety of electives and gaining a good understanding of what the Neurosurgical residency (and subsequent career) involves in terms of work and lifestyle. Be hard working, conscientious, reliable, honest, and courteous. Have letters from people we know that attest to this.

Programs Not Responding

Université de Montréal

Université de Sherbrooke

University of Alberta

University of British Columbia

University of Laval

McMaster University

NUCLEAR MEDICINE

Description of Specialty

The Royal College of Physicians and Surgeons of Canada (RCPSC) defines Nuclear Medicine as a medical specialty concerned “with the use of unsealed radioactive sources emitting a variety of radiations...in the study, diagnosis and treatment of disease.” The Nuclear Medicine Specialist will supervise, advise, and interpret imaging and other related diagnostic procedures while recognizing the vitality of the multidisciplinary approach when using Nuclear Medicine to diagnose and treat patients. A practising specialist is expected to have a working knowledge of the principles behind imaging technologies such as CT, PET, MRI, plain film X-ray and other relevant radiation detection instruments. As well, knowledge of pertinent anatomy, physiology, pathology, and pathophysiology is a must. Not only does the Nuclear Medicine Specialist act as a consultant but he or she will routinely obtain history from and perform physical exams on patients prior to diagnosis and initiation of appropriate therapy.

Overview of Program

A residency in Nuclear Medicine will require five years of training as set out by the RCPSC. Some programs offer a combined Nuclear Medicine/Diagnostic Radiology training leading to certification in both specialties. In general, this will involve an additional one or two years. PGY1 is a time for basic clinical training and most programs offer rotations through medical and surgical subspecialties. Three years of core Nuclear Medicine training is essential for successful completion of the program, with all programs either requiring or strongly suggesting the inclusion of clinical research projects following this three-year period. A period of three to 12 months is usually allotted for such research activities in the fifth year.

Fellowships offered without Royal College status:

- › Abdominal Imaging
- › Breast Imaging
- › Cardiac Imaging
- › Cross-sectional Imaging
- › Interventional Neuroradiology
- › Magnetic Resonance Imaging Research
- › Musculoskeletal Imaging
- › Neuroradiology
- › Pediatric Imaging
- › Thoracic Imaging
- › Vascular/Interventional Radiology
- › Women's Imaging

2010 Quota – Total Positions 8

	Quota	IMG Quota
Dalhousie University	1	–
McGill University	1	–
McMaster University	–	–
Memorial University	–	–
Queen's University	–	–
Université de Montréal	2	–
Université de Sherbrooke	2	–
Université Laval	–	–
University of Alberta	1	–
University of British Columbia	–	–
University of Calgary	–	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	–	–
University of Saskatchewan	–	–
University of Toronto	–	–
University of Western Ontario	1	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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McGill University

Strengths: Small program, lots of staff/resident contact. High caseload, with lots of Pathology. Modern equipment—two PET-CT scanners.

Workload: First year of program: First year is typical PGY1 year; same demands as Internal Medicine. Second phase of program: Years 2–5 are hospital-based in two large teaching hospitals. Electives in other hospitals are allowed. Pediatric Nuclear Medicine will also be done in a pediatric hospital. A typical week is 40 hours in the hospital. Lots of reading time during the day (typically two to three hours per day). On-call shared with staff on weekends.

Research Expectations: Research is encouraged and can be done for a period of up to one year, with a minimum requirement of one publishable study during residency. Up to 3 months of dedicated research time is provided to the resident to undertake research project.

Areas to Improve Program: We are open to evaluation of the program by residents. Individual residents can potentially have their programs modified to suit them.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Cardiology. Oncology/Hematology. Endocrinology.
- › **Other:** Do an elective or more in Nuclear Medicine and show enough interest to get a strong reference from your supervisor(s). Make it clear that you are highly motivated to do Nuclear Medicine and have the right background. Show that it is Nuclear Medicine you're interested in and not Diagnostic Radiology: Doing an elective in Radiology to show that you understand the difference between the fields and prefer the approach of Nuclear Medicine would be helpful.

University of Manitoba

Strengths: Essentially one-on-one teaching throughout. Dedicated physician staff, with strong support staff. Emphasis on clinical synthesis of patient data in Cardiac Nuclear Medicine, Endocrinology, Bone Mineral Density.

Common Clinical Encounters: Risk assessment of ischemic heart disease. Determination of extent of ischemia. Evaluation of patient for skeletal metastases. Myocardial function assessment. Pediatric and adult skeletal trauma.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	35–40	Varies	8 hrs/wk, no evenings
Second third of program	35–40	Varies	8 hrs/wk, no evenings
Final third of program	35–40	Varies	8 hrs/wk, no evenings

Research Expectations: Expected to do research in Radiopharmacy and Cardiac Nuclear Medicine rotations (may continue beyond the rotation). Expected to present from these projects or other research at Canadian and/or international conferences.

Areas to Improve Program: More formal discussions at the XRAY viewbox. Improvements to academic half day program (ongoing).

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Nuclear Medicine. Cardiology. Endocrinology.
- › **Other:** Investigate the field so that it is apparent that you know about Nuclear Medicine. Acquire some knowledge of career paths in Nuclear Medicine. Develop an interest in computers.

University of Western Ontario

Number of Reference Letters and Due Date: Three, due no later than December 15.

Personal Letter Information and Due Date: Due no later than December 15.

Strengths: Excellent facilities and teaching staff. Broad clinical exposure. Extensive opportunities for research.

Other Key Features: Excellent teaching. Program will pay for many of the books needed.

Common Clinical Scenarios: Rule out metastases (bone scan). Rule out fracture (bone scan). Diagnosis and risk stratification of ischemic heart disease. Evaluate thyroid function. Evaluate renal function.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40 hours	2-4	1-2 night/week from home
Second third of program	40 hours	2-4	1-2 night/week from home
Final third of program	40 hours	2-4	1 night/week

Research Expectations: Scholarly work expected from 2nd year onwards; one research project minimum. Up to six months given for research if resident wishes.

Areas to Improve Program: More frequent mock orals. More exposure to PET.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Nuclear Medicine. Radiology. Internal Medicine.
- › **Other:** Show interest. Do a Nuclear Medicine elective. Spend time in our department/research.

Programs Not Responding

Dalhousie University

Université de Montréal

Université de Sherbrooke

University of Alberta

OBSTETRICS AND GYNECOLOGY

Description of Specialty

Obstetrics and Gynecology is the unique medical specialty that is concerned exclusively with the delivery of health care to women throughout their lifespan. To do this effectively, an OB/GYN must be able to integrate extensive knowledge concerning female-specific reproductive physiology with the social, cultural, and environmental factors that accompany health care delivery to this population. Obstetricians are involved in the care of both mother and fetus for the duration of pregnancy and the miracle of birth, while gynecologists deal with a large spectrum of conditions that affect the female reproductive system. In practice, OB/GYNs have the opportunity to incorporate all facets of medical practice, including medicine and surgery, in a personally tailored practice that can range from primary OB/GYN care to subspecialization in the areas of Gynecologic Oncology, Reproductive Endocrinology and Infertility, or Maternal–Fetal Medicine.

Overview of Program

In general, all OB/GYN programs offered through CaRMS follow a very similar program format. All programs in OB/GYN are five years in duration. Each program offers protected academic half days every week to meet education objectives. The PGY1 year is a general multidisciplinary year, designed almost exclusively to

further solidify skills and concepts learned as a senior medical student and to aid in MCCQE II preparation. The PGY2 is composed of the “core” rotations of Obstetrics and Gynecology, while the third and fourth years of residency are devoted almost exclusively to specialty training (which differ depending on the program). The final year is generally spent in clinical OB/GYN as further preparation for private practice, with each resident acting as chief resident for a portion of the year. Although variation of this general pattern exists, the PGY2-5 years at all programs meet the requirements set out by the Royal College of Physicians and Surgeons of Canada for licensing.

Accreditation without certification:

- › Gynecologic Oncology
- › Gynecologic Reproductive Endocrinology and Infertility
- › Maternal–Fetal Medicine

Fellowships offered without Royal College status:

- › Advanced Obstetrics
- › Gynecologic Endoscopic Surgery/MIGS
- › Laparoscopic Surgery/AAGL
- › Mature Women's Health and Menopause
- › Minimally Invasive Gynaecologic Surgery
- › Pediatric and Adolescent Gynecology
- › Reproductive Biology
- › Urogynaecology

2010 Quota – Total Positions 99

	Quota	IMG Quota
Dalhousie University	4	–
McGill University	6	–
McMaster University	6	1
Memorial University	4	–
Queen's University	3	–
Université de Montréal	9	–
Université de Sherbrooke	4	–
Université Laval	7	–
University of Alberta	6	–
University of British Columbia	8	–
University of Calgary	7	–
University of Manitoba	6	–
University of Ottawa/Université d'Ottawa	7	1
University of Saskatchewan	6	–
University of Toronto	10	1
University of Western Ontario	6	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Collegiality. Responsibility given early.

Other Key Features: Time spent in Saint John, New Brunswick, is an excellent learning opportunity with a great deal of clinical, operative, and obstetrical exposure. Protected time for academic half day, research, visiting professors, etc.

Common Clinical Encounters: Pregnancy-induced hypertension.

Postdates. Postmenopausal bleeding. Infertility. Pelvic prolapse.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	07:30-17:00 daily	daily	1:4
Second third of program	07:30-17:00 daily	daily	1:5
Final third of program	07:30-17:00 daily	daily	1:6

Research Expectations: Complete one research project.

Areas to Improve Program: Develop operative skills lab. Enhance ambulatory experience.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** General OB/GYN. Maternal–Fetal Medicine. Any elective experience is valuable.

› **Other:** Good interpersonal/communication skills. Demonstrated interest in OB/GYN. Sensitivity to varied ethical dilemmas.

McGill University

Strengths: McGill trainees in Obstetrics and Gynecology will experience how patient care, research and teaching with cutting edge technology are integrated across McGill's teaching sites. From fetal laser therapy for twin-to-twin transfusion syndrome to robotic minimally invasive myomectomy and cryogenic preservation of oocytes, exciting opportunities are abound.

Our dynamic training of ObGyn residents includes:

- › MODULE-based learning of core ObGyn topics and subspecialties
- › OSCEs every 2 months over 2 years; preparation for Royal College exam

SIMULATION-based learning at 3 locations:

- › McGill Simulation Centre
- › Minimally Invasive Surgery Lab
- › ObGyn Simulation lab (obstetrical emergencies, amniocentesis, neonatal resuscitation, etc.)

Our 110 Faculty members are active in advancing patient care through evidence-based practice and through clinical and basic science research. Each year our Faculty contributes to the training of about:

- › 170 medical students
- › 45 obstetrics and gynecology residents
- › 15 fellows in various subspecialties
- › 10 post graduates in Reproductive Biology

Other Key Features:

Our teaching hospitals

MAIN SITES

- › Royal Victoria Hospital - MUHC (site of fetal laser therapy and internationally acclaimed reproductive technologies)
- › Jewish General Hospital (site of robotic surgery)
- › St Mary's Hospital Centre (site designated Baby Friendly by the World Health Organization)

COMMUNITY & RURAL SITES

- › LaSalle General
- › Gatineau, Cowansville, Chandler

Patient FACTS

- › 15,000 births / year at teaching hospital sites
- › 5,700 surgeries and 12,300 ultrasounds at MUHC / year
- › 1.7 million referral population for McGill RUIS (Réseau universitaire intégré de santé)

We are proud of our new website for the McGill Department of Obstetrics and Gynecology, which is regularly updated and provides a wealth of information for Residents, other trainees and staff, as well as for potential trainees and recruits. Learn more not only about our post graduate education programs, but also about the 8 departmental divisions, the over 100 faculty, the various types of patient care and the broad range of exciting research underway.

Visit: www.mcgill.ca/obgyn/

Common Clinical Encounters: Residents attain a comprehensive clinical exposure during the program to meet the Royal College requirements.

PGY1 - broad exposure

- › Obstetrics and gynecology
- › Endocrinology,
- › Ambulatory ObGyn care,
- › Hematology, emergency medicine, surgical ICU, neonatal ICU, and ObGyn ultrasound

PGY2 - focused

- › Obstetrics and gynecology

PGY3 - subspecialties

- › Maternal-fetal medicine, gynecologic-oncology, reproductive endocrinology & infertility and minimally invasive surgery

PGY4 - branching out

- › Research
- › Electives: colposcopy, adolescent gynecology, urogynecology, ObGyn ultrasound, ambulatory obstetrics and gynecology, or epidemiology.
- › Rural community-based rotation (3-6 mo)

PGY5 - leadership

- › Six months as Chief Resident
- › Six months individualized - electives (MFM, REI, laparoscopic surgery, and pathology)

Objectives for most rotations listed above are available on our website at the link: www.mcgill.ca/obgyn/teaching/residents/rotation-specific-objectives/

Expectations of Junior versus Senior Residents

Obstetrics

- › Junior residents assume responsibility for all normal and low-risk deliveries in the Birthing Centre and the supervision of medical students. Under the instruction of the attending staff residents accumulate experience in vaginal deliveries, the use of forceps, caesarean sections, episiotomy, fetal monitoring, as well as, post-operative and post-partum care.
- › Senior residents are assigned to the ambulatory and inpatient perinatal unit where they assess and direct the investigation and management of complicated pregnancies, labour, and deliveries. Instruction in the technique and interpretation of

diagnostic ultrasound is also provided.

Gynecology

- › Junior residents undertake basic surgical procedures in an ambulatory setting, as well as uncomplicated abdominal procedures.
- › Senior residents develop surgical skills in more complicated cases, such as hysterectomies, vaginal surgery, and gynecology operations. Ample opportunity is provided to develop expertise in minimally invasive surgeries, reproductive surgery, urogynecology, and colposcopy.

Workload: Call Schedule: McGill ObGyn Residency program operates a night float system where the residents work between 2 and 8 weeks of night calls (Sunday to Thursday 5 pm to 7 am) and the weekends are shared by the residents on service. The system, which allows the residents to be free during the weekday evenings and nights to be able to study or socialize, is greatly appreciated by the residents.

Research Expectations: We place an emphasis on research projects that are carried out by all ObGyn residents. The ObGyn Residency Research Committee ensures that resident research is fostered and encouraged through various activities and resources. Dedicated research rotations are scheduled throughout the 5 year program; additional electives may be devoted to research if academic career interests exist. Early on in the ObGyn residency trainees will find their research mentors/supervisors and develop their research proposals. Reproductive epidemiology courses are part of the curriculum and are specifically designed for our trainees by our staff epidemiologist. Statistical consulting services are available. RCOGC requires that each resident produces a manuscript in a publishable form, however, many trainees go beyond these criteria to publish at least one manuscript and present their findings at scientific meetings. Funding is available for completed projects to be presented in local, national and international meetings.

In short, it is expected that as part of their training Residents will be:

- › Identifying a research question of interest
- › Taking epidemiology or statistics courses
- › Being mentored by experienced faculty
- › Completing a project in a reasonable timeframe
- › Presenting research at a scientific meeting
- › Publishing research findings

Areas to Improve Program: Continue to increase simulation based teaching.

MEDICAL STUDENT TIPS

We are proud of our Obstetrics and Gynecology clerkship in which McGill medical undergraduate students (clerks) join interprofessional teams in our clinics, birthing centers, units and operating rooms. During the 8 week clerkship, students will integrate with these teams at the four hospital teaching sites. They will become familiar with the obstetrics and gynecology specialties and numerous sub-specialties. We have developed a thorough curriculum, exposing students to our evidence-based women's health care and the state-of-the-art technology on which our reputation has been built.

At the McGill Annual Career Day held for third year Medical Students we have a multi-media display of information including ObGyn Residents to share their love of the program and the specialty in person. Students are encouraged to embark on an incredible journey into women's health and choose Obstetrics and Gynecology at McGill.

› **Useful Electives/Experience:** Whichever electives appeal to the students Interest

› **Other:** N/A

McMaster University

Strengths: Surgical experience and teaching (particularly endoscopic procedures). Affable clinical faculty. Extensive integration of evidence-based medicine and critical appraisal.

Other Key Features: The McMaster OB/GYN program recently received a six-year, full accreditation from the Royal College of Physicians and Surgeons of Canada; values the opinions of the residents; and has a Program Director who is open and available. (These are opinions provided by the residents!)

Common Clinical Encounters: Delivery of normal pregnancies. First trimester bleeding and ectopic. Pre-term labour and premature rupture of membranes. Dysfunctional uterine bleeding and postmenopausal bleeding. Urinary incontinence and uterine prolapse.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50-70	2 hrs/night	1-2 calls/wk; 4-6 calls/mo
<i>Second third of program</i>	50-70	2 hrs/night	1-2 calls/wk; 3-6 calls/mo
<i>Final third of program</i>	50-70	2-3 hrs/night	2 calls/month

Research Expectations: All residents are required to complete and present two projects during their program. Residents are entitled to protected time in the program to pursue their individual projects. The program encourages additional resident research over and above the minimum outlined above.

Areas to Improve Program: Increase the number of resident research projects. Further improvement of the already excellent endoscopic teaching opportunities for residents.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Electives in the Hamilton area to allow prospective candidates an opportunity to work with McMaster faculty. Any elective in OB/GYN, Urology, or General Surgery.

› **Other:** Candidates should demonstrate sensitivity to women from all walks of life, be hard-working and energetic, and able to work well with other residents and faculty.

Memorial University of Newfoundland

Strengths: Small faculty-to-trainees ratio. No fellows, allowing for depth of exposure to subspecialty training. Interested and approachable faculty and cohesive group of residents. Good opportunities for practice in laparoscopic skills. Excellent research opportunities.

Other Key Features: Good teaching in rounds, academic half day, charged anatomy teaching. Excellent staff-resident interaction allowing for flexibility throughout training. Opportunities for international elective. Many social events to ease transition to resident life, including annual BBQ, Christmas rounds, etc. Opportunity to sit on many committees, attend local/international conferences, etc.

Common Clinical Encounters: N/A

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	Encouraged	1:4-1:6
Second third of program	40	Encouraged	1:4-1:6
Final third of program	40	Encouraged	1:6

Research Expectations: PGY2-5: two research projects. Option of completing Diploma/Master's Clinical Epidemiology. Two research projects (either prospective or chart review, case report, etc.) required. Each resident presents at 2-3 journal clubs/year (e.g., critical appraisal of recently published article). Resident Research Day — residents present their research projects once a year.

Areas to Improve Program: Develop faculty resource for medical educators (with OB/GYN). Faculty development.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Community OB/GYN — excellent opportunities in rural NL. Electives away help bring new perspective to discipline. Any research experience (esp. in OB/GYN) is helpful. Ambulatory Gynecology.
- › **Other:** Choosing electives in OB/GYN. Exposure to as many faculty as possible prior to match. Good references.

Université de Montréal

Research Expectations: During the 5th year of training, residents either carry out research or serve as chief resident for six to seven periods. For subspecialty in Gynecological Endocrinology of reproduction and fertility, residents carry out research for six months within the last two years of their program. For subspecialty in Maternal and Fetal Medicine, a research project is planned and conducted during the 6th-7th years of the program. The last six months of the 7th year are dedicated to this research project, which is expected to produce a manuscript for submission to a peer-reviewed journal. For subspecialty in Gynecological Oncology, residents learn to establish a research protocol, analyze results, and communicate them.

University of Alberta

Strengths: Very strong surgical program with lots of hands-on. Excellent success in FRCSC exams. Strong social resident support network with lots of funded travel opportunities.

Other Key Features: Annual resident retreat at Jasper Park Lodge. Funding for international conferences for work they present. Well-protected and -attended academic half day.

Common Clinical Encounters: High-risk obstetrical deliveries, e.g., twins. Emergency gynecology admissions, e.g., ruptured ectopic pregnancies. Prenatal visits: normal and high risk. Major pelvic surgical cases. Major obstetrical procedures, e.g., caesarean sections and related complications.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	4	12-24
Second third of program	40	8	12
Final third of program	40	8	12

Research Expectations: One project in each of years 3 and 4.

Areas to Improve Program: Add General OB/GYN in PGY4 instead of PGY5. Renumeration of clinical teachers who are currently not paid for teaching.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General OB/GYN (Major Tertiary Care Centre). General OB/GYN (Rural). Subspecialty OB/GYN.
- › **Other:** Have done an elective in the field. Show an obvious "team-player" mentality. Be a well-rounded individual.

University of Calgary

Strengths: The major strength of any program is the recruitment and maintenance of dedicated, excellent residents. We are fortunate in that we have a cohesive body of learners who attain their goals of competency and excellence in Obstetrics and Gynecology in a cooperative and collegial manner. This goal has been achieved by careful selection of residents and encouraging cooperation and collaboration of residents as they progress through their residencies. Special efforts have been made to encourage undergraduates to consider Obstetrics and Gynecology as a career choice. The residents and residency-training program have fostered promising students as they progress through medical school and in electives at the University of Calgary. The input and participation of the residents and the Residency Training Committee, at Resident Research Day and the Residents' Retreat, contribute significantly to ongoing change and program development and improvement. There is strong representation of all subspecialties in the program. The Gynecologic Oncology program is particularly strong, with all three members being ex-OB/GYN Program Directors. The Reproductive Endocrinology and Infertility Program provides excellent tertiary care experience with a strong, proven program of over 800 cycles of IVF a year and the highest pregnancy rates in Canada. This also offers residents

exposure to general reproductive endocrinology. The Maternal Fetal Medicine group recently opened an independent clinic that now affords residents excellent teaching in Obstetrics. The program in Urogynecology is also very strong, with the addition of a fourth member in December of 2003. There are fellowship programs in Gyne Oncology, Urogynecology, and Maternal Fetal Medicine in Calgary. The Faculty of Obstetrics is very dedicated to the maintenance and improvement of the residency training program. There is very open and thorough communication and dialogue between residents and the department. This dialogue has been particularly facilitated by the recent addition of many residents who graduated from the program and are currently staff at the Peter Lougheed and Rockyview Hospital. This group of young specialists has brought significant enthusiasm and dedication to resident teaching.

Other Key Features: Five residency training spots per year. Full six-year recent Royal College Accreditation. Extensive Clinical OB/GYN surgical experience (15,000 deliveries/year). Excellent collegial relationships: inter-resident and resident and faculty.

Common Clinical Encounters: Normal vaginal delivery. Failure to progress in first- or second-stage labour requiring C-section. Spontaneous abortion: missed or incomplete. Dysfunctional uterine bleeding with anemia. Ectopic pregnancy.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	85	5	1:4
Second third of program	65	10	1:5
Final third of program	65	10	1:6

Research Expectations: Each resident is expected to be involved in at least one process of academic inquiry over their time in residency. This may take the form of a chart audit review, a case report and review of the literature in the junior years, and a clinical trial and/or bench research project in the more senior years. These results are presented at the Annual Clara Christie Research Day in Obstetrics and Gynecology.

Areas to Improve Program: Recruit more full-time staff.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Gyne Oncology. General Obstetrics and Gynecology. Maternal Fetal Medicine.
- › **Other:** Electives and real interest in Obstetrics and Gynecology. Show a strong interest and competency in research. Well-rounded background. Good team player.

University of British Columbia

Strengths: Excellent clinical teaching staff. Positive team environment. Superior rural rotation experience.

Other Key Features: The program possesses a team-based environment that is surrounded by a highly supportive clinical teaching staff and mentors. Along with a supportive environment, the program utilizes a handheld organizer-based procedure logging program as well as an Internet-based evaluation system. These systems are paperless, faster, and more convenient than conventional evaluation and procedure logging procedures used elsewhere. The evaluation system also

allows residents to view the areas where increased study and/or improvement are needed. We also prepare the residents for the Royal College Exam by holding bi-annual oral OSCE examinations and an annual CREOG examination. Residents receive direct, one-on-one feedback on these examinations that enables them to gauge which areas need more attention in their studies and in the clinics. An additional key feature to our program is the mandatory rural rotation(s) in Kamloops, Nanaimo, or Prince George. These provide the resident with an increased amount of surgical and rural-patient care opportunities. Additionally, departmental and non-departmental supported conferences provide the resident with increased knowledge in various obstetric and gynecological topics, all in preparation for our residents to graduate from our program to begin their careers as Obstetricians/Gynecologists.

Common Clinical Encounters: Normal labour and delivery. Pre-term labour and delivery/PPROM. Gestational hypertension. Vaginal bleeding. Ectopic bleeding.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	21	48
Second third of program	40	21	36
Final third of program	50	28	24

Research Expectations: The resident is given a protected three-month block for research during PGY2 or 3. They are expected to take their research to manuscript submission as well as present a research topic at two of the annual department academic days in the program over the five years. This can be a work in progress and a completed project presentation, or two separate research project presentations. The opportunity to do more time in research is available if desired.

Areas to Improve Program: Increase the number of residents in order to allow more flexibility in the junior years. Increase the amount of surgical time at the three main teaching hospitals in Vancouver.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** General Obstetrics and/or Gynecology. Community or Rural Obstetrics and Gynecology. A subspecialty rotation such as Gynecologic Oncology, Maternal Fetal Medicine, or Reproductive Endocrinology and Infertility.
- › **Other:** Show sincere interest in the program (via OB/GYN-related electives, volunteer work, publications, etc.). Ability to work in a team environment as a team player. Possess a sense of humour.

University of Ottawa

Strengths: Outstanding surgical (including advanced endoscopy) training and experience balanced by a large volume of academic and community obstetrical training experience. An academic environment with protected time to facilitate research. All subspecialties contribute to resident training, including Reproductive Medicine/IVF, Gyn Oncology, Maternal Fetal Medicine, Pediatric/Adolescent Gynecology, and Urogynecology. Residency director and training committee who sincerely listen

to and incorporate residents' suggestions into the training program. A friendly environment with good camaraderie. Academic Half Day, Annual Retreat, Mentorship Program, Journal Club, Baffin Island Program, and ratio of residents to faculty is 1:2. Call schedule that consistently has fewer calls per month than PAIRO guidelines allow. Located in Canada's capital with easy access to cultural and outdoor activities.

Other Key Features: For a student looking for excellent training in Obstetrics and Gynecology in a friendly atmosphere conducive to learning, the University of Ottawa is the place to be.

Common Clinical Encounters: Our department is a referral centre for all of Eastern Ontario and much of Northern Ontario and Western Quebec. As a result, the residents here have the opportunity to care for patients with both common and rare problems in Obstetrics and Gynecology.

Workload: Please see our Website at <http://www.carms.ca> for a detailed look at the rotation schedule for all years.

Research Expectations: Our research requirement is well structured and organized.

Areas to Improve Program: Continued acceptance of top candidates with an enthusiastic interest in the specialty. Continued vigilance in ensuring that residents' learning needs take precedence over service needs.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Obstetrics and Gynecology especially at the University of Ottawa. Any OB/GYN subspecialty elective.
- › **Other:** Demonstrate a sincere passion for Obstetrics and Gynecology. Good interpersonal skills. Good team player.

University of Saskatchewan

Strengths: Close contact with faculty. Excellent endoscopy experience. Research opportunity and mentoring. Develops excellent general Obstetricians and Gynecologists. Royal College Fully Accredited Residency Program.

Other Key Features: Early hands on surgical skills training. Distributed education program between Saskatoon, Regina and Prince Albert.

Common Clinical Encounters: Intrapartum care. Ambulatory obstetrics in the Obstetric Triage Unit. Caesarean delivery. Total laparoscopic hysterectomy. Normal vaginal delivery. Hysteroscopy.

Workload: Graduated call system. Program meets Royal College of Physician and Surgeons of ICanada training requirements.

Research Expectations: One research project completed to peer review for publication over four years. Protected time for research half day per week.

Areas to Improve Program: Increase subspecialty faculty numbers.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Laparoscopic surgery elective. Community Obstetrics and Gynecology. Obstetrics and

Gynecology international elective.

- › **Other:** Commitment of OB/GYN as a career. Good interpersonal skills Professionalism.

Programs Not Responding

Queen's University

Université de Sherbrooke

Université Laval

University of Manitoba

University of Ottawa – NOSM Stream

University of Toronto

University of Western Ontario

OPHTHALMOLOGY

Description of Specialty

Ophthalmology deals with the screening, diagnosis, and management of optical, medical, and surgical disorders and diseases of the visual system — the eyes, associated orbital structures, and neuro-visual pathways. It embraces aspects of Neurology, Pathology, Plastic Surgery, Dermatology, Microbiology, and other specialties. Subspecialties within Ophthalmology include Cornea and External Diseases, Glaucoma, Neuro-ophthalmology, Ophthalmic Pathology, Ophthalmic Plastic Surgery, Pediatric Ophthalmology, and Vitreoretinal Diseases. The Ophthalmologist often interacts with other physicians in the diagnosis and management of systemic diseases that have ocular manifestations. Fine motor skills, depth perception, and colour vision are necessary for effective clinical and surgical practice. Over a week, a General Ophthalmologist will commonly spend three to four days in the office seeing patients and one to two days in the OR performing major surgical procedures, with cataract removal being the most common.

Overview of Program

All ten programs in Ophthalmology are five years in length. The PGY1 year provides a broad clinical background for residents and prepares them for Part II of the Medical Council of Canada Qualifying Examinations. Training during the PGY2 to PGY5 years varies with each institution but, in general, allows the candidate to acquire a knowledge of basic sciences and clinical skills necessary to the understanding and practice of the specialty. Teaching is provided through clinics, surgical rotations, rounds, and formal didactic sessions. Exposure to each of the subspecialties is also incorporated. Research in one's area of interest is highly encouraged and in some programs, mandatory with protected time provided. Elective periods and selective rotations are usually provided in PGY4 and PGY5 through which residents will be encouraged to explore their own interests at or outside their base institutions.

Fellowships offered without Royal College status:

- › Corneal and External Diseases
- › Glaucoma
- › Glaucoma and Advanced Anterior Segment Surgery
- › Low Vision Rehabilitation
- › Medical Retina
- › Ocular Genetics
- › Ocular Oncology
- › Oculoplastic and Orbital Surgery
- › Pediatric Ophthalmology
- › Retina

2010 Quota – Total Positions 35

	Quota	IMG Quota
Dalhousie University	2	–
McGill University	3	–
McMaster University	1	–
Memorial University	–	–
Queen's University	3	–
Université de Montréal	5	–
Université de Sherbrooke	2	–
Université Laval	3	–
University of Alberta	2	–
University of British Columbia	3	–
University of Calgary	2	–
University of Manitoba	–	–
University of Ottawa/Université d'Ottawa	2	1
University of Saskatchewan	1	–
University of Toronto	4	1
University of Western Ontario	2	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Collegiality. Academic activities. Wide spectrum of clinical material.

Other Key Features: Strongly suggest you come to Dalhousie ahead of time to better know the program and be known.

Common Clinical Encounters: Chronic open angle glaucoma. Macular diseases. Cataract (often with exfoliative complications). Diabetic retinopathy. Strabismus (children and adult).

Workload: Full-time and study at night and weekends.

Research Expectations: None in 1st year. One referred paper and yearly local presentations during the whole residency.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Neurology. Ophthalmology. Plastics.
- › **Other:** All-round positive personality traits and activities. Scientific endeavours. Strong work ethic.

McGill University

Strengths: Broad depth of teaching. Good volume of patients. Good surgical variety and volume.

Other Key Features: There is a large amount of literature in Ophthalmology and this requires dedication to studying. Also, the candidate should have excellent vision and stereopsis (with or without glasses) and very good manual dexterity.

Common Clinical Encounters: Red eye scenario. Trauma to the eye and surrounding tissues. Patients with Glaucoma. Patients with Cataract. Retinal and Neuro-ophthalmology disorders.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	45	7+	1 in 4
Second third of program	45	7+	1 in 4
Final third of program	45	7+	1 in 4

Research Expectations: Residents do a research project and present it at our annual scientific meeting each year (except in their PGY1 year).

Areas to Improve Program: Greater funding for wet labs and other teaching methods. Expansion of resources for research.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Neurology. Endocrinology. Dermatology.
- › **Other:** Do one or more electives in Ophthalmology to be sure this is for you. Work on a research project as a student.

Queen's University

Strengths: Committed clinical faculty. Extensive exposure to ocular clinical pathology at an early level. Strong resident camaraderie.

Other Key Features: Due to the size of this program, all participants must be highly collegial with strong interpersonal and communication skills.

Common Clinical Encounters: Ocular trauma. Diabetic retinopathy. Cataracts. Strabismus. Age-related macular degeneration.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	10	1:3
Second third of program	40	15	1:6
Final third of program	40	15	1:6

Research Expectations: None in 1st year. Each resident should do one research project per year.

Areas to Improve Program: Better triage of emergency referrals.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Neurology. Endocrinology. General or Plastic Surgery.
- › **Other:** Have a strong work ethic. Be well rounded. Have good manual dexterity.

Université de Montréal

Strengths: Large department with representation from all subspecialties of ophthalmology. One professor to one resident relationship. Multicultural city with a large population: very good sample of all pathologies.

Other Key Features: Three hospitals including rotation at our pediatric facility (Ste-Justine). 5 residents per year.

Common Clinical Encounters: Diabetic retinopathy, ARMD, retinal detachment, retinal dystrophies, corneal dystrophies, infections of the eye, pediatric ophthalmology and strabismus, neuro-ophthalmology, glaucoma, oculoplastic surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1 in 4 weeks
Second third of program	50	10	1 in 4 weeks
Final third of program	50	20	1 in 4 weeks

Research Expectations: At least one prospective project throughout the course of the residency.

Areas to Improve Program: Better integration of the three teaching sites (hospital departments). We are presently working on it.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** One to two electives in ophthalmology; one at University of Montreal if possible.
- › **Other:** We are looking for future residents that will be a pleasure to work with and that are willing to read a lot.

University of Alberta

Strengths: Centralized, regionalized eye-care hospital and clinic. Large volume and breadth of problems seen. Collegial and respectful nature of staff/ resident interaction. Variety of learning environments and teaching sessions: Eg. Annual Resident Glaucoma Day, Weekend Resident Retina Retreat, Morning Rounds, Journal Clubs, Grand Rounds, Research Day, protected academic half day, Chief rounds, Ophthalmology Surgical Simulator.

Other Key Features: Please see: <http://www.ophthalm.med.ualberta.ca/Home/index.cfm>

Common Clinical Encounters: Ocular trauma. Uveitis. Retinal Detachment. External Eye Disease. Diabetic Eye Disease. Lid lacerations.. Glaucoma. Tele-ophthalmology.

Approximate Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
R2	50	Variable	1:4 in 5 + Daycall
R3	32-40	9-18	1:4 in 5
R4	8-12	36	1:4 in 5
R5	30	9-18	1 in 5 (backup)

Rounds / Teaching Seminars per week - 6 hours

Reading: Individual (averages 1-2 hours/day)

Research Expectations: Residents conduct either clinical or basic science research projects for presentations at the Annual Resident Research Day in each of the second to fourth year. Research projects can be undertaken as a part of a clinical rotation of interest in the 24 weeks of elective time offered during the five-year residency. Individual initiative for more involved research may be evaluated and accepted, depending on the ability of the program to accommodate the resident.

Areas to Improve Program: No specific indication made by resident staff.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** No preference. Elective experience is at the discretion of student.
- › **Other:** Demonstrate good work ethic in both mandatory and individual training activities. Have a well-rounded, enthusiastic personality. Develop relationships with individuals so that references express sincere information about your integrity and ability.

University of British Columbia

Strengths: Strong teaching base. Good faculty. Good relationship between teachers and residents. Plenty of clinical material for hands-on learning.

Other Key Features: N/A

Common Clinical Encounters: N/A

Workload: N/A

Research Expectations: A minimum of one research project per year to be presented at our annual research day and any other projects you might be motivated to take on.

Areas to Improve Program: Larger resident body (increase critical mass). Increase outreach experience for residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** N/A
- › **Other:** Show your enthusiasm for learning and zest for life.

University of Manitoba

Strengths: Excellent clinical exposure with high surgical volumes, enthusiastic & friendly faculty with small resident numbers, all subspecialties represented, dedicated teaching time. Exposure to rural ophthalmology.

Other Key Features: One resident place per year. It is essential that residents are able to work in a professional and collegial manner. Good communication skills are essential.

Common Clinical Encounters: All manner of ophthalmic pathology.

Workload: Full time with further study (reading, journal clubs etc...) required in evenings and weekends. Call: 1 in 4

Research Expectations: None in PGY1. PGY2-5 residents are expected to complete one paper for peer reviewed publication and annual presentations at departmental grand rounds of an evidence-based review of a selected topic.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** We encourage students to gain elective experience in fields other than ophthalmology to broaden horizons and allow for competitive application to other specialties in the event that they do not match to ophthalmology. Interests beyond medicine are always beneficial.

› **Other:** N/A

University of Ottawa

Strengths: Mid-sized program with no fellows to dilute clinical experience. Very strong surgical experience. Twelve geographic full-time physicians at the Eye Institute who are interested in resident teaching. Large number of subspecialists in the program. Rotations in three hospitals.

Other Key Features: N/A

Common Clinical Encounters: Emergency/comprehensive resident clinics. Cataract surgery, strabismus surgery, other subspecialty surgery. Subspecialty resident clinics. Resident half day teaching sessions. Grand rounds, professors' rounds, journal club, resident research projects.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	42.5	10	1 in 5 junior call
Second third of program	42.5	10	1 in 5 junior call
Final third of program	42.5	10	1 in 5 senior call

Research Expectations: None in 1st year. One research project per year, except in last year. Master's level preferred (or expected). Ph.D./postdoctorate available.

Areas to Improve Program: Increase the clinical space, services, and number of operating rooms in the Eye Institute.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Ophthalmology elective in Ottawa. Ophthalmology elective elsewhere.

› **Other:** Strong academic standing. Well-rounded personality and interests. Spend time doing electives in the field of your choice.

University of Saskatchewan

Strengths: Excellent surgical teaching (particularly in small-incision phaco, topical anesthesia, strabismus, oculoplastics). Good physical resources localized to one centre. Residents to attend Lancaster or Stanford basic science course.

Other Key Features: N/A

Common Clinical Encounters: Neuro-ophthalmology. Glaucoma. Cataract. Strabismus. Oculoplastic.

Workload: First third of program: Multidisciplinary PGY1 year. Second third of program: PGY2-5 are the core years in Ophthalmology. Call averages 1:4.

Research Expectations: None in 1st year. One research project during residency (most residents exceed this). Master's level, doctorate, or higher available.

Areas to Improve Program: More full-time faculty. More Community Ophthalmologists to lessen the input of cases while on emergency call.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Ophthalmology. Any others are fine.

› **Other:** Take an elective in Ophthalmology to make sure the field is suited to you. Find out about all programs offered in Canada. Arrange electives at those programs in which you are most interested.

University of Toronto

Strengths: Wide variety of Pathology. Large faculty. Academic focus.

Other Key Features: Residents in the program are happy about their choice of program and career.

Common Clinical Encounters: Visual loss. Ocular trauma. Red eye. Cataract. Retinal detachment.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	55-60	5	10-15
Second third of program	55-60	5	10-15
Final third of program	60-65	5	10-15

Research Expectations: Resident is required to complete a research project suitable for publication in PGY3. There is also the option of Clinician Scientist program to allow one to obtain a Master's, doctorate, or higher.

Areas to Improve Program: Centralize eye care in one centre. More residents needed.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Clinical electives at University of Toronto. Electives in Ophthalmology outside of Toronto. Other surgical electives, e.g., Plastic Surgery, Neurosurgery.

› **Other:** Research (any field). Electives in Ophthalmology. Interpersonal skills.

University of Western Ontario

Strengths: Surgical exposure and experience. Approachability of staff. Faculty extremely interested in teaching. Large volume of patients. High clinical volume at beginning of residency. Excellent resident support. Strong collegiality among the Ophthalmology residents. Dedicated teaching time. Ranked highest program for residents' satisfaction.

Other Key Features: Large patient population allows for increased exposure to many different clinical scenarios and a diverse range of Pathology. The program consistently produces very strong Ophthalmologists, many of whom go on to complete fellowship programs. Upon completion of the training program, residents have significant surgical experience to obtain the necessary skills. Many applicants to our program were not "keeners" from early med school. While electives and research help, personality and diverse experiences are also held in high regard. If you are interested in the field, and are willing to accept another choice should you not be accepted, then don't be afraid to apply. You may surprise yourself.

Common Clinical Encounters: Retinal detachment. Acute red eye. Trauma: ruptured globe, blow-out fractures, lid lacerations. Acute loss of vision. Cataract.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	54	6	25 hrs/wk
Second third of program	50	12	20 hrs/wk
Final third of program	40	14	15 hrs/wk

Research Expectations: Three projects over PGY2-5.

Areas to Improve Program: Expand Pediatric Ophthalmology and Neuro-ophthalmology departments. Improved access to new technology.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Ophthalmology. Plastic Surgery. Neurology.

› **Other:** Ophthalmology electives. Research in the area of Ophthalmology. Good personal qualities (hard-working, team player, teachable, etc.).

Programs Not Responding

McMaster University

Université de Sherbrooke

Université Laval

University of Calgary

ORTHOPEDIC SURGERY

Description of Specialty

Orthopedics is the medical specialty devoted to the diagnosis, treatment, rehabilitation, and prevention of injuries and disease of the musculoskeletal system. This complex system includes bones, joints, ligaments, tendons, muscles, and nerves. Treatment of fractures and prosthetic joint replacements are major parts of Orthopedics, while diseases of the back, including lower back pain, sciatica, and trauma, are commonly seen problems. Orthopedic surgeons may engage in a broad practice or may focus on a narrower area of special interest, such as hand surgery or sports medicine. They usually play an important part in treating major trauma. Specialists in the field employ medicine, surgery, and physical rehabilitation to restore normal function. Orthopedists treat patients of all ages and both sexes, mostly on a short-term basis. Orthopedic surgeons characterize themselves as doers who find satisfaction in their ability to attain good results relatively quickly for most of their patients.

Overview of Program

Most of the programs in Orthopedics are five-year programs (except for the program at the University of Toronto, which lasts six years). In general, the first two years encompass core training, with rotations in areas such as Internal Medicine, Emergency Medicine, the Intensive Care Unit, and Surgery. The surgical blocks can include General, Pediatric, Vascular, Thoracic, and Plastic Surgery, as well as Neurosurgery and some Orthopedics. Subsequent years are spent entirely in Orthopedic Surgery, covering areas such as trauma, pediatrics, adult reconstruction, spine, upper limb, oncology, and sports medicine.

Fellowships offered without Royal College status:

- › Arthroplasty and/or Lower Extremity Reconstruction
- › Arthroscopy
- › Foot and Ankle
- › Hand/Upper Extremity
- › Lower extremity/Trauma
- › Musculoskeletal Oncology
- › Paediatrics
- › Spine
- › Upper Extremity/Trauma

2010 Quota – Total Positions 79

	Quota	IMG Quota
Northern Ontario School of Medicine	1	–
Dalhousie University	3	–
McGill University	4	–
McMaster University	7	3
Memorial University	2	–
Queen's University	3	–
Université de Montréal	7	–
Université de Sherbrooke	5	–
Université Laval	6	–
University of Alberta	3	–
University of British Columbia	5	1
University of Calgary	6	–
University of Manitoba	3	–
University of Ottawa/Université d'Ottawa	5	1
University of Saskatchewan	4	–

<i>University of Toronto</i>	10	2
<i>University of Western Ontario</i>	5	1

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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McMaster University

Strengths: Residents are considered junior colleagues (congenial atmosphere for learning). Resident input in running their program with key representatives on the Program Committee. Program Director has been called by the Royal College, “a dynamic committed individual who has made vast strides to continue to improve program”.

Other Key Features: We care about our residents at every level. We strive to update our curriculum with resident input. Key features brought in this year are 4 OSCEs (2 Senior & 2 Junior), MCQs and formal anatomy teaching on key orthopaedic approaches.

Common Clinical Encounters: Total joints, sports medicine, paediatric, oncology, foot, ankle and trauma.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	1-2 per week	4 hrs/week	1 in 5
<i>Second third of program</i>	1-2 per week	6 hrs/week	1 in 4
<i>Final third of program</i>	1-2 per week	8 hrs/week (in preparation for RC exam)	1 in 5

Research Expectations: Year 2: Surgical Foundations, PHY5 Graduating Residency Research Day; Protected time can also be applied for ½ day per week. Research blocks up to 3 months can be requested from Research Director in PGY 3 year. McMaster also has a Surgical Scientist Program/ Clinical Investigators Program where if accepted, will be funded for 1 year to complete a year of research. <http://fhs.mcmaster.ca/ssp/>

Areas to Improve Program: More staff research.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Surgery, with Orthopedic component.
- ▶ **Other:** The successful applicant should be a hard worker, a team player, and be of the highest of integrity.

Memorial University of Newfoundland

Strengths: Residents work in all subspecialties of Orthopedics. Small group allows excellent professional relationships to develop (residents are not lost in the crowd). No fellows in our program. Early hands-on teaching results in residents who are technically skilled.

Other Key Features: We are a small program with enough clinical material to produce a well-rounded surgeon. We MUST beat the division of General Surgery in the annual Maroun Cup Hockey

Tournament thus hockey skills of any kind (coaching, playing, or heckling from the crowd) are desirable. Newfoundland offers many opportunities; it's safe, quiet, and has many outdoor activities to help busy residents relax, while the cost of living is quite reasonable.

Common Clinical Encounters: Hip fractures, long bone fractures, degenerative and inflammatory arthritis, disorders of the spine, sports injuries.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	2-3 days/wk + OR	2-3 days/wk	1 in 4
<i>Second third of program</i>	2-3 days/wk + OR	2-3 days/wk	1 in 4
<i>Final third of program</i>	2-3 days/wk + OR	2-3 days/wk	1 in 4

Research Expectations: At least two projects completed during training, optional Master's in Clinical Epidemiology.

Areas to Improve Program: Number of cases: our small population presents a challenge with respect to volume. Research infrastructure: not as well-developed as some larger programs, but improving.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Whatever interests the student. We will not judge the elective, only the student's performance in that elective. You are not expected to come with a substantial knowledge base in orthopedics. We have five years to teach you that.
- ▶ **Other:** Candidates wishing to be successful must demonstrate academic achievement at the university and medical school level, demonstrate experience/interest in scientific research, and pursue extracurricular activities or skills that may pertain to the field.

Queen's University

Strengths: Only one Emergency Department to cover when on call. Only one inpatient unit to cover. Wednesday morning is protected academic time for rounds, seminars, and simulations.

Other Key Features: Protected research time is available (half day on Wednesday pm to complete research projects) We have moved to a “night float system, where one resident covers call after 11pm.

Common Clinical Encounters: Trauma, arthroscopic surgery, joint arthroplasty, pediatric orthopedics, lumbar disk disease, and spinal stenosis.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50	7	1 in 4 in hosp.
<i>Second third of program</i>	50	7	1 in 5 home call
<i>Final third of program</i>	50	10.5	1 in 4 home call

Research Expectations: PGY1: none. Two manuscripts by time of graduation.

Areas to Improve Program: Increase flexibility of OR time.
Increase flexibility of clinic time.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Any type of Orthopedic surgery.

› **Other:** Successful applicants must demonstrate strong work ethic, a willingness to take responsibility, and demonstrate leadership ability.

Université de Montréal

Strengths: Excellent atmosphere, collegial, clinical volume, motivated faculty, early technical exposure, strong research, oncology.

Other Key Features: French, 100% success at RCPS since 2002, several candidates do a Master's.

Common Clinical Encounters: Complete spectrum of orthopedic surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program (R2-3)</i>	50	10	1 call a week in hospital, next day off
<i>Second third of program (R4)</i>	60	10	2 calls a week in house but almost always at hospital. No day off. One "complete weekend" call a month (usually 72 hours straight)
<i>Final third of program (R5)</i>	55	15	2 calls a week in house, junior resident takes the first call or less active hospital. No day off. One "complete weekend" call a month.

Research Expectations: All do at least one project.

Areas to Improve Program: Foot and ankle, hand, CanMeds.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Surgical/musculoskeletal rotations. Orthopedic surgery at least one. Some research experience can be helpful.

University of Alberta

Strengths: Preceptor-based rotations allow experiences in all aspects of Orthopedics. Residents work in association with hospitalists, thereby reducing service work. Good rapport between residents and staff. Volume is sufficient to give experience in all areas of Orthopedics.

Other Key Features: The program is known for good relationships

between residents and staff.

Common Clinical Encounters: Open reduction, internal fixation of fractures, arthroscopy, joint replacement, ligament repair.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	60	4	In house: 1 in 4
<i>Second third of program</i>	60	6	Home: 1 in 4
<i>Final third of program</i>		N/A	

Research Expectations: Literature review in PGY1. Project for presentation each year in PGY2-4. Project for publication in PGY5.

Areas to Improve Program: More full-time academic staff. More residents to reduce workload.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Orthopedic Surgery in more than one centre.

› **Other:** The successful applicant should have experience in Orthopedic Surgery, demonstrate evidence of psychomotor skills, and be personable, easy to work with, and motivated.

University of Calgary

Strengths: All aspects and subspecialties of Orthopedic Surgery covered. Dynamic and energetic faculty. Expanding division with large amount of clinical and research capabilities.

Other Key Features: Quality teaching, plentiful clinical material, outstanding research opportunities.

Common Clinical Encounters: Trauma, fractures, knee pain and instability, back and neck pain, shoulder pain, pediatric musculoskeletal problems.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	6-10	1.5 days/wk
<i>Second third of program</i>	40	6-10	1.5 days/wk
<i>Final third of program</i>	40	6-10	1.5 days/wk

Research Expectations: One project/year; some residents take one year to perform the Surgery Scientist program (Master's level, optional).

Areas to Improve Program: Continue to recruit young, dynamic staff, remunerate, and encourage teaching within program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Orthopedic Surgery.

› **Other:** The successful applicant should make sure he or she loves Orthopedics by having experienced it, have clear goals, and be honest and hard working.

University of Manitoba

Strengths: Size of program means results in good interaction between staff and residents. and attending staff. Broad spectrum

of pathology results in strong training in wide range of orthopedics. Excellent camaraderie amongst residents and high Royal College exam success rate.

Other Key Features: Protected resident education and research time of one day per week.

Common Clinical Encounters: Abundant trauma, total joint arthroplasty, complex spine surgery, arthroscopic knee and shoulder surgery, pediatric orthopedics, elbow and hand reconstruction, foot and ankle reconstruction

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	As much as possible	1 in 4
Second third of program	47	As much as possible	1 in 4
Final third of program	40	As much as possible	1 in 6

Research Expectations: PGY1-4: none. At least one clinical or basic science project/year. PGY5: Optional and encouraged.

Areas to Improve Program: Continued upgrade/addition to Hand / Foot and Ankle / Tumor exposure.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Sports Medicine, Arthroplasty, Spine.
- › **Other:** The successful applicant should be sure to have taken orthopedic electives (preferably within our program), have a research exposure, and have references confirming the candidate possesses the personality and attitudes that we feel necessary for a successful student.

McGill University

Strengths: Strong Teaching

Other Key Features: N/A

Common Clinical Encounters:

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	8 hrs/wk	5-7hrs/wk	6-9/month
Second third of program	8 hrs/wk	7hrs/wk	6-7/month
Final third of program	8 hrs/wk	10-12hrs/wk	4-6/month

Research Expectations: Present twice during visiting professor (required). Multiple other basic science/clinical projects available depending on resident interest/motivation.

Areas to Improve Program: Hand surgery exposure

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Do electives on busy services, at programs you want to match too. (trauma/sports/spine)
- › **Other:** N/A

University of Ottawa

Strengths: We are medium size, but cover all sub-specialties. We have excellent, committed teachers and excellent residents who work very well together. We have a dedicated academic 1/2 day. A research rotation in 3rd year and elective in 4th year.

Other Key Features: Orthopedics is a high need specialty with an increasingly aged population (and many orthopods set to retire!). Our residents are well trained and do well in their royal college exams.

Common Clinical Encounters: All subspecialties are represented: pediatric, arthroplasty, sports and arthroscopy, spine, trauma, upper extremity, foot and ankle.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1:4 in house
Second third of program	50	10	1:4 in house
Final third of program	50	10	1:4 in house

Research Expectations: Residents are expected to complete two papers prior to finishing fourth year. They are to be presented at the annual academic day and prepared for publication. We have a research rotation in third year.

Areas to Improve Program: We would like to encourage more women to enter Orthopedics.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Orthopedics (any subspecialty). Other surgical specialties.
- › **Other:** Evidence of leadership skills.

University of Saskatchewan

Strengths: A smaller program with a strong and dedicated full-time faculty complemented by a strong part-time faculty. Our small size allows for a relaxed and collegial relationship between the staff and residents. Rigorous series of academic rounds where there are always faculty in attendance, for which the residents have protected time. Residents' hospital on-call commitments are at one hospital only (Royal University). Residents have a strong voice in our Resident Program Committee and are often the stimulation for change(s) to our program. Nine months of office-based rotations with our part-time faculty: exposure to high volume of orthopedics and insight into private practice and office management.

Other Key Features: More information is available through the CaRMS Website or by contacting ortho.surgery@usask.ca.

Common Clinical Encounters: Adult arthritis hip and knee, adult sport-related knee, adult sports-related shoulder, adult fractures, pediatric fractures.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5	1 in 4 to 1 in 3
Second third of program	50	5	1 in 4 to 1 in 3
Final third of program	50	5	1 in 4 to 1 in 3

Research Expectations: PGY3-4: mandatory research project presented annually at the Saskatchewan Orthopedic Residents' Research Meeting. Half day of research time per week.

Areas to Improve Program: In Saskatoon, electives for residents are limited. Most are done out of province.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Orthopedics at University of Saskatoon, Orthopedics elsewhere, Neurosurgery, Plastics, or General Surgery.

› **Other:** The successful applicant should do electives demonstrating an interest in Orthopedics, and when doing electives make it known you're interested in Orthopedics. Ideally, your manual skills will be evaluated. Do an elective at the centre(s) you'd most like to train at.

University of Toronto

Strengths: Large clinical volume. Strong research base. Internationally recognized faculty.

Other Key Features: This is a five-year program, containing an integrated research-clinical year during PGY3, with a 60/40 split between research activities and clinical rotations. Although we train excellent Orthopedic Surgeons who will enjoy good Community Orthopedic practices, our main goal is to train the academic Orthopedic Surgeons of the future.

Common Clinical Encounters: Diagnosis and management of osteoarthritis, isolated skeletal trauma, multitrauma, spinal disorders and deformity, congenital skeletal abnormalities.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	12 hrs/day	2 hrs/day	1 in 4
Second third of program	12 hrs/day	2 hrs/day	1 in 4
Final third of program	12 hrs/day	4 hrs/day	1 in 4

Research Expectations: One year minimum, but encouraged to earn a Master's or Ph.D.

Areas to Improve Program: More support services within the hospital. Daytime trauma rooms in the operating room.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Orthopedics, Plastics, Neurosurgery.

› **Other:** The successful applicant should have achieved a high academic standard, a well-rounded life, and research experience.

University of Western Ontario

Strengths: Excellent formal teaching program. Multiple research opportunities. Wide breadth of subspecialty exposure.

Other Key Features: All staff are subspecialty-trained. There is a close staff-resident working relationship. The residents have hands-on involvement in all aspects of care.

Common Clinical Encounters: Arthritis, fractures, knee trauma/arthritis, lower back pain, hip trauma.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	individual	Home: 1 in 4
Second third of program	50	individual	Home: 1 in 4
Final third of program	50	individual	Home: 1 in 4

Research Expectations: One clinical or basic science project yearly to be presented at the annual Residents Day Conference in May of each year.

Areas to Improve Program: Obtain funding for additional residency positions. Speed up consolidation of hospital resources.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Arthroplasty/Sports, Upper Extremity, Pediatrics/Trauma.

› **Other:** The successful applicant should have done an elective at one of the teaching hospitals, have participated in research, and have demonstrated academic excellence.

Programs Not Responding

Dalhousie University

Université de Sherbrooke

Université Laval

University of British Columbia

Northern Ontario School of Medicine

OTOLARYNGOLOGY

Description of Specialty

Otolaryngology is a fascinating field that demands critical thinking, fine motor skills and manual dexterity, and excellent interpersonal skills. ENT Physicians treat all pathologies of the head and neck except ocular problems and lesions of the brain. They have the privilege and responsibility of working with such important and personal features as the face and the voice. Areas of focus include and are not limited to Rhinology, Laryngology, Otolaryngology and Skull Base Surgery, Head and Neck Oncology and Reconstructive Surgery, and Facial Plastic Trauma Surgery. ENT Surgeons generally enjoy a good balance of medicine and surgery, and the somewhat unique privilege of performing both micro- and macro-surgery. The field offers the opportunity to treat all ages and sexes.

Overview of Program

Otolaryngology is a five-year program, with the first year or two years (depending on the school) dedicated to teaching core surgery skills. Subsequent years involve rotation through different areas of Otolaryngology, with the aim of developing the resident's knowledge base and clinical and surgical skills. All programs require some degree of research.

Fellowships offered without Royal College status:

- › Facial Cosmetic Surgery
- › Head/Neck Reconstructive Surgery
- › Laryngology
- › Otology Neurotology
- › Pediatric Otolaryngology
- › Rhinosinology
- › Trauma Surgery

2010 Quota – Total Positions 32

	Quota	IMG Quota
<i>Dalhousie University</i>	2	–
<i>McGill University</i>	2	–
<i>McMaster University</i>	2	–
<i>Memorial University</i>	–	–
<i>Queen's University</i>	–	–
<i>Université de Montréal</i>	2	–
<i>Université de Sherbrooke</i>	2	–
<i>Université Laval</i>	2	–
<i>University of Alberta</i>	3	–
<i>University of British Columbia</i>	3	–
<i>University of Calgary</i>	2	–
<i>University of Manitoba</i>	2	–
<i>University of Ottawa/Université d'Ottawa</i>	2	1
<i>University of Saskatchewan</i>	–	–
<i>University of Toronto</i>	5	–
<i>University of Western Ontario</i>	3	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Medium-size program. Young faculty. Excellent workload.

Other Key Features: Excellent staff/resident relationship and high resident morale. Halifax is a very attractive city.

Common Clinical Encounters: N/A

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50%	25%	25%
<i>Second third of program</i>	50%	25%	25%
<i>Final third of program</i>	50%	25%	25%

Research Expectations: Residents are expected to present a research project each year. Master's level optional.

Areas to Improve Program: Attract new recruits. Increase research productivity.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Otolaryngology. Anesthesia. General Surgery.
- › **Other:** Come for an elective. Team spirit. High academic standing.

McGill University

Strengths: Versatile clinical practice and subspecialty training. Microsurgery and macrosurgery experience. Strong dynamic teachers with large proportion hospital based. Very friendly and professional atmosphere. Protected time for education. Provide stipends to residents to present in meetings.

Other Key Features: Research enrichment year for 4th year residents. Good infrastructure of basic laboratories to do good research projects. In-house direction of research to supervise residents directly. Auditory science and vestibular laboratories in house.

Common Clinical Encounters: Head and neck cancer patients and their management. Pediatric Otolaryngology with airway problems. Hearing abnormalities and congenital disorders. Otology and neuro-otology experience. Rhinology and sinus pathologies. Plastic and reconstructive surgery of the head and neck

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50	6	24-36
<i>Second third of program</i>	50	6	24-36
<i>Final third of program</i>	45	6	24

Research Expectations: Resident are encouraged to present a project during the annual resident research day. Most residents are involved in a clinical/basic science research project in their enrichment year. Some complete Master's in Otolaryngology.

Areas to Improve Program: Increase the number of residents matching. More funding from the government.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Electives in Otolaryngology in McGill and other electives.
- › **Other:** Good evaluation. Strong letters of references. Strong performance in their interviews.

Université de Sherbrooke

Strengths: Integrated/longitudinal clinical exposure. Quality of life in Sherbrooke. Overall quality of residents graduating from our programs.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	50	4-8	1 in 5 from home
<i>Second third of program</i>	50	4-8	1 in 5
<i>Final third of program</i>	50	8-12	1 in 5

Research Expectations: All residents must present a paper at a

national meeting. One to three months dedicated to research.

Université Laval

Strengths: Intensive and precocious clinic and OR exposition. Convivial team environment.

Other Key Features: Only cochlear implant program in Quebec.

Common Clinical Encounters: Large exposure, very diversified pathologies in all subspecialties.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50 (excluding call)	8	9 calls per month
Second third of program	50 (excluding call)	15	9 calls per month
Final third of program	50 (excluding call)	20	9 calls per month

Research Expectations: One peer reviewed article and at least one meeting talk during residency.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Must be fluent in French. Otolaryngology, other surgical specialty electives.

University of British Columbia

Strengths: Wide range of subspecialty-trained faculty. Large volume of clinical material. Collaborative atmosphere.

Other Key Features: N/A

Common Clinical Encounters: Chronic rhino-sinusitis. Hearing loss of various etiologies. Cancer of the upper aerodigestive tract. Chronic otitis media. Balance disorders.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	36
Second third of program	50	12	36
Final third of program	40-50	15-18	24

Research Expectations: Yearly project for presentation; may be a multi-year project.

Areas to Improve Program: Gradually shift the hierarchy of surgical experience to more junior years. Increase the research activities of faculty members.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Otolaryngology. Plastic Surgery. Pediatrics.

› **Other:** Organize electives in a few different ENT training programs. Become familiar with the Royal College objectives of training for Otolaryngology. Understand that the demand for ENT residency positions exceeds the supply and have a good back-up plan.

University of Manitoba

Strengths: Large clinical volume/medical surgical. Dedicated teaching time. Good support staff.

Other Key Features: Well developed outreach programs in Nunavut and Uganda. Ability to complete Masters during residency if resident desires.

Common Clinical Encounters: All areas of specialty training are well represented.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50-55	10	1 in 4
Second third of program	55-60	10	1 in 4
Final third of program	50	20	1 in 6

Research Expectations: One research paper per year. Multiple clinical rounds.

Areas to Improve Program: Research, teaching.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** One week rotation.

University of Ottawa

Strengths: Excellent clinical and surgical exposure at all levels of residency. Motivated faculty who enjoy teaching. Collegial atmosphere between staff and residents makes for healthy workplace. Well designed academic curriculum. Well established research programs.

Other Key Features: Well developed outreach programs in Nunavut and Uganda. Ability to complete Masters during residency if resident desires.

Common Clinical Encounters: All areas of specialty training are well represented.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5hrs/week	Varies
Second third of program	50	5-8hrs/week	1 in 6
Final third of program	40	10-12hrs/week	back up call only in senior year

Research Expectations: Three papers during residency program with strong faculty involvement in project.

Areas to Improve Program: Resident input is valued for continuous improvement of program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** student needs to have completed otolaryngology-head and neck surgery elective. Elective is not required to be in Ottawa for program to consider application.

› **Other:** N/A

University of Toronto

Strengths: Largest teaching faculty. Largest educational resources (core curriculum, surgical volume, administrative support). Expertise in full spectrum of subspecialties.

Other Key Features: A focus in career counseling — particularly in academic milieu. Large sources of research funding compared to other programs. PGY1 Surgical Skills Training and Simulation. Numerous visiting professors and continuing education courses.

Common Clinical Encounters: Acute or progressive hearing loss in children and adults. Adults with head and neck cancer. Emergency airway management. Nasal-sinus infection.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	10	1/2 days/wk	1:3
Second third of program	10	1/2 days/wk	1:3
Final third of program	10	1/2 days/wk	1:3

Research Expectations: Mandatory four months in PGY2. (Master's level optional).

Areas to Improve Program: Increase the number of residents.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Academic Otolaryngology. Academic Surgery (general or subspecialty). Others.
- › **Other:** Strong academic records. Evidence of good manual dexterity.

University of Western Ontario

Strengths: Close supervision by consulting staff covering all major subspecialties. Strong track record on Royal College exams.

Other Key Features: Strong research through ENT faculty and interdisciplinary relationships.

Common Clinical Encounters: Infections of upper aerodigestive tract. Head and neck malignancies. Hearing loss and/or vertigo. Airway/voice disorders. Nasal/sinus problems.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1:3
Second third of program	50	10	1:3
Final third of program	40	20	1:3

Research Expectations: Minimum of one research study in each of the final three years of the program. Encourage research in earlier years.

Areas to Improve Program: Continue to evolve based on resident feedback.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Three- to four-week general elective in our department. Elective in another Canadian Otolaryngology department. Other surgical electives.

- › **Other:** Be a well-rounded, enthusiastic, hard-working, honest, personable student. Show a keen interest in Otolaryngology while trying to impress as many Otolaryngologists as possible. Collaborate, ideally to completion, in at least one research study in Otolaryngology.

Programs Not Responding

Université de Montréal

McMaster University

University of Alberta

University of Calgary

PEDIATRICS

Description of Specialty

The Pediatrician's job is to manage the health care needs of infants, children, and adolescents. This includes physical and psychosocial growth and development monitoring, age-appropriate screening, diagnosis and treatment of acute and chronic disorders, management of serious and sometimes life-threatening illness, and provision of coordinated management.

Overview of Program

All programs in Pediatrics are four years in duration. In general, the PGY1 through PGY3 years are core years that fulfill the requirements set out by the Royal College of Physicians and Surgeons of Canada. These years include rotations in Child Development, Neonatology, NICU, Emergency, Psychiatry, and General Pediatrics with selectives in various specialties. The PGY4 year is often flexible, allowing students to begin their subspecialization, pursue research, or complete a final year in general Pediatric training.

Certificate of special competence:

- › Adolescent Medicine
- › Cardiology
- › Clinical Immunology and Allergy
- › Critical Care Medicine
- › Endocrinology and Metabolism
- › Gastroenterology
- › General Surgery
- › Hematology/Oncology
- › Infectious Diseases
- › Nephrology
- › Respiratory Medicine
- › Rheumatology

Accreditation without certification:

- › Clinical Pharmacology
- › Critical Care Medicine
- › Developmental Pediatrics
- › Neonatal-Perinatal Medicine
- › Pediatric Emergency Medicine
- › Transfusion Medicine

Freestanding program from Royal College:

- › Pediatric Neurology — trainees do one year of Pediatrics prior to entering their four-year Neurology program.
- › Medical Genetics — trainees do approximately six months of Pediatrics through first and second year of their training program.

Neither of these two specialties are certified as Pediatricians at the end of their training.

Fellowships offered without Royal College status:

- › Academic Pediatric Medicine
- › Adolescent Medicine
- › Developmental Pediatrics

2010 Quota – Total Positions 136

	Quota	IMG Quota
Dalhousie University	5	–
Northern Ontario School of Medicine	3	–
McGill University	9	–
McMaster University	7	3
Memorial University	5	1
Queen's University	4	1
Université de Montréal	11	–
Université de Sherbrooke	7	–
Université Laval	9	–
University of Alberta	7	–
University of British Columbia	13	–
University of Calgary	10	–
University of Manitoba	8	–
University of Ottawa/Université d'Ottawa	8	2
University of Saskatchewan	5	1
University of Toronto	17	3
University of Western Ontario	8	2

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: The Pediatric program at Dalhousie University and the IWK Health Centre is a relatively small training program. This means that the residents have appropriately increasing responsibility early in the program. They also work one-on-one with their attending staff and are involved in all aspects of their patients' management.

Other Key Features: The training program has a graded call schedule where residents in their first and second years do proportionately more call (one in four) than residents in the third and fourth year. The program includes rotations that are available in all the Pediatric subspecialties. There is elective time starting in second year. Subspecialty rotations are a combination of inpatient and outpatient care. Starting in second year, residents attend a monthly Continuity Clinic throughout the rest of their training. Through this experience they have the opportunity to have gradually increasing responsibility in the full care for their own patients.

Common Clinical Encounters: The residents do hospital-based inpatient and outpatient rotations as well as subspecialty clinics. As well, there is an emphasis on Community Pediatrics with rotations in Saint John, New Brunswick, as well as preceptorships with General Pediatricians in the community

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40-50	5-10	1 in 4
Second third of program	40-50	5-10	1 in 5
Final third of program	40-50	5-10	1 in 6

Research Expectations: All residents must complete a scholarly project during their first three years of Pediatric training. In first year, all of the PGY1s do a rotation in Academic Skills, which includes a course in critical appraisal, statistics, research design and all other aspects of starting and successfully completing a research project.

Areas to Improve Program: The program is improved on a regular basis based on the feedback from the Pediatric residents. We are currently trying to strengthen our adolescent rotation by having the resident involved in youth health centres through the local junior and high schools. We are also increasing the exposure to Community Pediatrics and bringing it into the junior years.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Although we would like the medical student to have shown interest in Pediatrics through their choice of electives, we would also prefer if not all of their electives were in Pediatrics. Rather, we would like to know that they have explored the breadth of medicine before making a career decision. It is absolutely not necessary to do an elective within our program. We appreciate that medical students have relatively few elective opportunities and that there are 16 excellent pediatric training programs throughout the country.

› **Other:** Due to the small size of our program and the fact that we work very closely together, we are an excellent program for residents that are keen and enthusiastic and wish to develop their skills as early as possible.

McGill University

Strengths: Diverse patient population (ethnic, socio-economic, as well as clinical material). Mid-sized pediatric institution, large enough to have strong representation of subspecialty consultant services, but small enough to remain a personable and collegial environment for learning. Presence of a continuity clinic.

Other Key Features: An excellent place to be exposed to a broad range of clinical material reflecting the current realities of consultant and tertiary care Pediatrics. A commitment to providing exposure to the social determinants of health. A belief that child health in Canada requires many different kinds of individuals (those who will become subspecialists, Academic Pediatricians, strong Community Pediatricians), and a commitment to facilitate their training.

Common Clinical Encounters: Asthma/respiratory infections. Children with complex needs (survivors of technology, chronic diseases, etc.). Prematurity and its complications. Chronic and life-threatening illnesses in Pediatrics. Acute non-respiratory infections.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40-50	On cases	6 days/28 days
Second third of program	40-50	On cases	6/28 max
Final third of program	40-50	On cases	6/28 max

Research Expectations: None in 1st core of Pediatrics, but four to eight weeks are available. Research strongly encouraged but not mandatory. Clinical PGY2-3 Investigator track available if interested in developing special competence in research. Master's or doctorate level would take extra time.

Areas to Improve Program: Increase exposure to outpatient consultant practice. Exposure to longitudinal aspects of care.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Pediatric subspecialty rotation at McGill. Pediatric subspecialty rotation(s) at other Canadian centres. Rotations in other specialties involving Child Health (Adolescent Medicine, Pediatric Psychiatry, Pediatric Surgical Specialties).

› **Other:** Excellent academic record. Demonstrated commitment to the field of child health, its advancement, and to one's own lifelong learning. Demonstrated sense of compassion/professionalism/collegiality as attested to by comments from clinical supervisors.

McMaster University

Strengths: Resident independence with good/appropriate staff backup. Dedication to teaching (excellent, protected academic half day, Tues./Thurs. teaching sessions, PICU rounds). Staff dedicated to teaching and resident support.

Other Key Features: Residents will be trained as sound, capable general Pediatricians. Freedom of residents to choose a 4th year of General Pediatrics or subspecialty field. Excellent resident support with a strong emphasis on resident education and well-being.

Possible exposure to Rural and Northern Pediatrics through connections with Thunder Bay, Barrie, and Owen Sound. Yearly funding of \$750 for conferences.

Common Clinical Encounters: Infectious Diseases (respiratory—bronchiolitis/croup/pneumonia; GI—diarrheal disease; GU—UTIs/pyelonephritis, cellulitis). Asthma. Trauma. Neuro: Seizures, hydrocephalus and shunts, postop craniotomy (in Pediatric ICU). Neonatal.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	60	4	5-7 days/mo
Second third of program	60	6	5-6 days/mo
Final third of program	60	8	3-5 days/mo

Research Expectations: None in 1st year. All residents are expected to complete a research project during their residency. This may consist of a basic clinical science endeavour (resident dependent). At a minimum, a quality assurance project is

required; this research is expected to be presented for grand rounds. Master's, doctorate, or higher level training available.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any elective at McMaster Hospital. This will allow clerks to see the program and speak to the current residents. General Pediatrics.
- › **Other:** Adequate exposure to field. Ability to work in multidisciplinary team. Strong social skills.

Memorial University

Strengths: Small program. No fellows, so the residents are directly responsible for patient care, with help from the staff. Excellent training in General Pediatrics that also prepares you well for subspecialty training. Excellent staff–resident relationship and absolutely non-intimidating environment. Upon completion of residency, residents are well-rounded, competent, and excellent leaders.

Other Key Features: A very resident-friendly program. Excellent staff-to-resident ratio and relations.

Common Clinical Encounters: Wide variety of Pediatric patients, both General Pediatrics and subspecialty patients. This includes: Patients with acute respiratory distress secondary to asthma/bronchiolitis. Patients with diabetic keto acidosis. Patients with gastroenteritis and dehydration requiring fluid management. Patients with metabolic problems presenting with loss of consciousness/hypoglycemia. Newborns, infants presenting with sepsis.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	20 weeks CTU/ 8 weeks Ambulatory	Lots	1:4
Second third of program	8 weeks CTU/ Rural/Rsych	Lots	1:4
Final third of program	12 weeks Ambulatory/ 4 weeks CTU	–	Less than or equal to 1:5

Research Expectations: None in 1st year. Research is mandatory (+ one month rotation in research in 2nd year + every 6th to 8th academic half-day is for research) and residents must present every year at our annual resident research day. Master's level — optional, and candidates have gone to Master's in Epidemiology while enrolled in Pediatrics. Doctorate or higher level training available.

Areas to Improve Program: 1) Increase physician wellness training. This has already been incorporated into the program through retreats and such and it will be a regular part of the half days as well. 2) Increase exposure to First Nations/Aboriginal children. There is some exposure during regular rotations, but we have now added a rural rotation up north in order to improve exposure.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Any branches of Pediatrics. General or subspecialty.
- › **Other:** Have a pleasant personality with ability to interact with children, parents, and families. Be a team player. Show interest in global and local Pediatrics, ethics, and advocate for children's health and related issues.

Queen's University

Strengths: Graded responsibility allowing more independence in decision-making at the junior level. Early introduction to Community Consultant Pediatrics. Senior responsibilities encompass entire spectrum of General Pediatrics, reflecting community-based practice.

Other Key Features: The relatively small size of the Pediatric program allows the development of close working, supportive relationships among the trainees in the program and the members of the department. The department's commitment toward the residency program is reflected not only in the provision of training environments with wide-ranging clinical opportunities, but also in the comprehensive seminar program. Excellent hands-on, broad-ranging clinical opportunities at Queen's are enhanced by the specific subspecialty selectives at CHEO in Ottawa.

Common Clinical Encounters: Neonatal resuscitation — both low- and high-risk deliveries. Respiratory illnesses. Infectious diseases. Developmental/behavioural problems. Disorders of growth.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	3	1 in 4 or 5
<i>Second third of program</i>	40	5	1 in 6
<i>Final third of program</i>	40	10	1 in 6 or 7

Research Expectations: Residents are expected to participate in and complete a research project. A mentor is assigned to each resident to assist in this process. Training in research methodology is provided in first year.

Areas to Improve Program: More time allocated to rotations outside the training centre. Provide opportunities for subspecialty (fellowship) training.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Community-based Pediatrics. Clinical rotation in a small- to medium-sized community. Pediatric subspecialty rotation.
- › **Other:** Demonstrated interest in Pediatrics. Wide breadth of personal interests/experiences. Demonstrated abilities in team collaboration.

Université de Montréal

Strengths: Breadth and diversity of clinical exposures. Availability of a full range of subspecialists and access to quaternary-level technology and levels of care. Dynamic involved teaching staff. Active participation of residents in the residency program and in hospital life.

Other Key Features: The vast majority of training takes place at one centre (CHU Ste-Justine) but elective opportunities exist and all residents receive training in centres in outlying regions. Working language of the hospital residency program is French and proficiency in the French language is essential.

Common Clinical Encounters: Hospital-based general populations. Outpatient General Pediatrics. Subspecialty rotations including both clinic and in-patient care, e.g., Cardiology, Neurology, Hematology, Oncology, etc. Intensive care rotations in NICU, PICU. Emergency department rotations.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call*
<i>First third of program</i>	45/wk + 15 on-call	5-10	6 calls/ 28 days
<i>Second third of program</i>	45/wk + 15 on-call	10-15	5-6 calls/ 28 days
<i>Final third of program</i>	45/wk + 15 on-call	15-20	5-6 calls/ 28 days

*Includes 2 weekend days

Research Expectations: Participation in a research project strongly encouraged with the expectation that residents will be able to present at the Pediatric Department Residents' Research Day and at a national or international conference at some point in their residency. Training in clinical epidemiology, biostatistics and methodology is offered. Certain residents may choose to join the CIHR Clinician Researcher training program during the residency.

Areas to Improve Program: There is definitely enough clinical exposure to allow for a much larger group of residents, but the number of residency positions is limited by the Quebec government and hasn't increased significantly in the last few years.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** It is not essential to have done elective exclusively in Pediatrics or exclusively at CHU Ste-Justine. It is important to have had some exposure to sick children to assess your ability to handle the environment of a children's hospital. A solid base in Internal Medicine would serve a Pediatric resident well.
- › **Other:** Residents in our program work hard! They are strongly encouraged to take part in activities outside of their regular clinical duties (e.g., committees, health advocacy projects, social events). The residency program is currently overwhelmingly female. Male applicants are welcome.

Université Laval

Strengths: Dynamic and motivated faculty and residents. Remarkable supervision. Numerous academic teaching sessions.

Other Key Features: Access to a fully functional simulation lab for learning techniques and teamwork. Five-year program as requested by the College des Médecines du Québec (three-year core Pediatrics, two-year academic Pediatrics).

Common Clinical Encounters: Residents are exposed to very diversified clinical situations from acute illnesses in the NICU, PICU and ER to less acute and chronic illnesses in various clinics and clinical teaching units.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	45	5	36
Second third of program	45	5	36
Final third of program	45	5	36

Research Expectations: All residents are expected to complete a scholarly project between PGY2 and PGY3.

Areas to Improve Program: The success of our program depends on the residents themselves. We allow flexibility to cater to the needs and requirements of the residents; therefore, improvements required depend on the needs of the residents.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** NICU, PICU, PEDS Cardiology, PEDS Pulmonology, PEDS Gastroenterology, Infectious disease elective.

University of Alberta

Strengths: Cohesive and enthusiastic group of Pediatric residents, representing all parts of Canada. Broad basis of Pediatrics experience, including all acute care areas, as well as all ambulatory subspecialty areas. Young and rapidly growing faculty with a keen interest in teaching.

Other Key Features: Visit <http://www.pediatrics.ualberta.ca> for more details.

Common Clinical Encounters: Respiratory illnesses ranging from mild bronchiolitis and asthma to severe pneumonia, status asthmatics, cystic fibrosis. Common Pediatric infectious diseases, such as fever without focus, osteomyelitis, meningitis, bacteremia, cellulitis. Also more rare presentations like malaria. Neurological Pathology, such as seizure and seizure disorders, cerebral palsy, hypotonia. Metabolic disorders such as mitochondrial disease. Congenital heart disorders. Children with multi-system congenital abnormalities.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	7-10	6-7 days/mo
Second third of program	50	7-10	5-6 days/mo
Final third of program	0	10-20	4-5 days/mo

Research Expectations: Two weeks in the second half of R-1 and up to eight weeks in each of PGY2, 3, and 4.

Areas to Improve Program: Increase community-based consultant Pediatrics exposure (often non-urban in Alberta). Continue to put in place within the system resident replacement options to create more flexibility for resident rotation scheduling.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Community Pediatrics. Infectious Diseases. Neurology.

› **Other:** Get exposure in Pediatrics rotations early in undergraduate elective time. Demonstrate that you are more than just a solid student—what makes you different and a “better candidate” for Pediatrics training? Talk with Pediatric residents. Find out what life in Pediatrics is really like at the institution that you are applying to.

University of British Columbia

Strengths: We believe our team of Pediatrics residents are No. 1. Variety of opportunities both clinically and academically. A vibrant resident research program with the opportunity to travel to scientific conferences.

Other Key Features: We are a resident-centred program that actively helps trainees achieve their career objectives.

Common Clinical Encounters: Bronchiolitis. Pneumonia. UTI. Cardiac defects. Fever NYD.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	7:30 a.m. – 5 p.m. x 5 days	8	1:4
Second third of program	7:30 a.m. – 5 p.m. x 5 days	8	1:5
Final third of program	7:30 a.m. – 5 p.m. x 5 days	8	1:5–1:6

Research Expectations: None in 1st year. Residents are expected to develop a scholarly project during the program. Master's level, doctorate, or higher level training available.

Areas to Improve Program: Increase clinical opportunities in view of bed closings.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Renal. CTU. ID or Endo. (All of these electives have friendly, supportive, and knowledgeable faculty and fellows.)

› **Other:** Demonstrate aptitude/interest in Pediatrics. Team relationship skills. Evidence of being a good Clinician.

University of Calgary

Strengths: 1. Large complement of both General Pediatricians and subspecialties to teach. 2. Esprit de corps of residents. 3. Well established simulation program involving multiple

modalities. 4. Structured Academic Half Day Curriculum which rotates on a 2 year basis, in addition to many other structured teaching opportunities. 5. Directors have open door policy. 6. Curriculum matches Royal College objectives.

Other Key Features: 1. Large program so workload is reasonable for each resident but may result in a diluted experience for residents. 2. Flexibility. 3. Scheduled night call rotations reduce the amount of cross coverage throughout the year allowing residents to maximize time spent on rotations. 4. Academic half day each week. 5. Grand rounds, development rounds, resident rounds and journal club.

Common Clinical Encounters: 1. Generally a fair number of complex patients with multi-system involvement of their disease process in addition to excellent exposure to all of the common pediatric problems. 2. Strong emphasis on ambulatory exposure including a longitudinal community clinic as well as several community rotations, one of which will be in a smaller urban center outside Calgary.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call*
<i>First third of program</i>	80	Up to the individual resident	1:4
<i>Second third of program</i>	70	Up to the individual resident	1:4
<i>Final third of program</i>	60	Up to the individual resident	1:4

* Total call for the year will decrease in the fourth year.

Research Expectations: In 1st year the residents have a mandatory four-week research block in which to initiate a research project and learn research methods. This assists residents with completion of a mandatory scholarly project, which is now required by the Royal College.

Areas to Improve Program: Enhancement of a mentorship program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Any elective here will give a student a “feel” for the program. Electives are not necessary to be a successful applicant to the program.

University of Manitoba

Strengths: Excellent team relationships between residents, students, staff, and allied health care. Well-rounded program in general and subspecialty Pediatrics with a belief in graduated responsibility. Willing to rise to challenges and change.

Other Key Features: Well-developed Northern and Rural Pediatrics experiences.

Common Clinical Encounters: As per any Pediatric centre in Canada.

Workload: Please see CaRMS Website.

Research Expectations: None in 1st year. Residents are expected to complete or demonstrate substantial progress in basic science, clinical, medical education, or quality assurance project by the end of 3rd year. Master’s, doctorate, or higher level training available.

Areas to Improve Program: Constructive feedback to learners and teachers. Develop more ways for residents to demonstrate the CANMEDS competencies and better means of assessing these competencies.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Pediatric electives of any kind are important. New novel electives being developed in Feeding and Nutrition, and Ethics.

› **Other:** Demonstrate interest in Pediatrics through clinical electives, research, committee work, volunteer work, etc.

University of Saskatchewan

Strengths: Low staff-to-resident ratio. Early hands-on experience.

Other Key Features: N/A

Common Clinical Encounters: All common illnesses of children.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	—	7 calls/mo
<i>Second third of program</i>	40	—	6 calls/mo
<i>Final third of program</i>	40	—	5 calls/mo

Research Expectations: None in 1st year. All residents must do a mandatory research project, which is presented at the Academic Half Day. Master’s level. Doctorate or higher training available.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Any in Pediatrics.

› **Other:** Have all appropriate documentation available.

University of Toronto

Strengths: Academic activity and research. Broad range of general and subspecialty Pediatrics. Excellent residents in program.

Other Key Features: This is the largest program for Pediatrics in Canada and all branches of the discipline are represented in the work done at HSC. Please see CaRMS info for details.

Common Clinical Encounters: Common acute illnesses in children, e.g., fever, seizures, etc. Developmental and behavioural problems. Wide range of subspecialty Pediatric cases, e.g., leukemia, cystic fibrosis, etc.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50-60	Resident's choice	1/4 max
Second third of program	50-60	Resident's choice	N/A
Final third of program	50-60	Resident's choice	Decreased number of calls

Research Expectations: None in first year, but a research project in the first three years. Graduate work is also an option.

Areas to Improve Program: We review our program on an ongoing basis and deal with issues as they arise. Recent focus has been on developing CanMEDS learning opportunities for our residents. Ensuring a balance between community and subspecialty experiences. Very responsive to resident feedback.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Pediatric community elective. Pediatric general/subspecialty hospital-based elective.
- › **Other:** Ensure you are interested in and committed to a career in Pediatrics.

University of Western Ontario

Strengths: Acute care. Faculty/resident camaraderie. Resident autonomy with excellent staff support.

Other Key Features: Western is a middle-sized tertiary care centre with excellent resident/faculty interaction. Excellent acute care training. Great resident camaraderie.

Common Clinical Encounters: Acute presentation of respiratory disease. Management of septic infants. Management of febrile neutropenia. Common childhood disease presenting to the Pediatric Emergency: dehydration/gastroenteritis. Seizures.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5-10	6-7
Second third of program	50	5-10	5-6
Final third of program	50	5-10	4-5

Research Expectations: None in 1st year. Residents are expected to complete one academic pursuit or research project during the core years. Dedicated research months are offered in second and third years. Master's level. Doctorate or higher training available.

Areas to Improve Program: Monthly objective-related quizzes. Increase subspecialties.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Community Pediatrics. Pediatric emergency. Clinical teaching unit.
- › **Other:** Demonstrate enthusiasm, clinical skills, and knowledge of Pediatrics. Pediatric electives. Pediatric research.

Programs Not Responding

Université de Sherbrooke

University of Ottawa

PHYSICAL MEDICINE AND REHABILITATION

Description of Specialty

Physiatrists are physicians who specialize in Physical Medicine and Rehabilitation (PM&R), a medical specialty that involves the comprehensive diagnosis, management, and treatment of people of all ages with impaired functional abilities. Typical patients seen for rehabilitation have disabilities and physical handicaps resulting from conditions such as head injury, stroke, neuromuscular disorders, cardiopulmonary diseases, arthritis, peripheral vascular disease, cerebral palsy, and others. The Physiatrist focuses on maximizing a person's functional capabilities and independence by medical treatment and by working with an interdisciplinary rehabilitation team. A patient's rehabilitation program could include physical, occupational, and speech therapies; psychosocial services; family and vocational counseling; education services; and therapeutic recreation.

Overview of Program

All programs in Physical Medicine and Rehabilitation are five years in duration. Generally, the first year of the program involves basic comprehensive training in relevant areas of Internal Medicine and Surgery, as well as in other fields (e.g., Anesthesia, Pediatrics, Psychiatry, etc.). The subsequent four years consist primarily of specialty-specific PM&R rotations, along with general rotations in Rheumatology, Orthopedic Surgery, and Neurology. The various PM&R subspecialty rotations include Head Injury, Spinal Cord Disorders, Cerebrovascular Disease, Respiratory, Cardiac, Musculoskeletal, Prosthetics and Orthotics, Pediatric Rehabilitation, Community-based Rehabilitation, and Research. All of the programs offer considerable elective and selective time, allowing residents to customize their training to meet the needs of their future practice. Emphasis is placed on residents acquiring the skills necessary for directing and working with an interdisciplinary rehabilitation team. All residents in PM&R are required to complete at least one research project during the residency program.

Fellowships offered without Royal College status:

- › Amputee Care
- › Cardiopulmonary Rehabilitation
- › Electrodiagnostics
- › Hospice and Palliative Medicine
- › Musculoskeletal Medicine
- › Neuromuscular Disorders
- › Neuromuscular Medicine
- › Pain Medicine
- › Pediatric Rehabilitation
- › Spinal Cord Injury Medicine
- › Sports Medicine
- › Traumatic Brain Injury (TBI)

2010 Quota – Total Positions 24

	Quota	IMG Quota
Dalhousie University	1	–
McGill University	–	–
McMaster University	2	1
Memorial University	–	–
Queen's University	1	–

<i>Université de Montréal</i>	2	–
<i>Université de Sherbrooke</i>	–	–
<i>Université Laval</i>	2	–
<i>University of Alberta</i>	2	–
<i>University of British Columbia</i>	2	–
<i>University of Calgary</i>	2	–
<i>University of Manitoba</i>	2	–
<i>University of Ottawa/Université d'Ottawa</i>	2	–
<i>University of Saskatchewan</i>	2	–
<i>University of Toronto</i>	3	1
<i>University of Western Ontario</i>	1	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Number of Reference Letters and Due Date: Three required with CaRMS application.

Personal Letter Information and Due Date: Submit with CaRMS application.

Strengths: Fully accredited Royal College Specialty Program with strong record of success on Fellowship exams. Free-standing rehabilitation hospital located within walking distance of four world-class teaching hospitals, Dalhousie University, and the downtown core. Attending staff provide exceptional support for the residency program.

Other Key Features: Well-respected program in Canada and internationally. Significant research activity by department members. Extraordinary part of Canada to live in. Very generous conference travel program for residents.

Common Clinical Encounters: Spinal cord injury. Stroke. Traumatic brain injury. Amputation. Musculoskeletal.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40	7+	1:5 call from home
<i>Second third of program</i>	45	7+	1:4 call from home
<i>Final third of program</i>	25	12+	1:5 call from home

Research Expectations: The Royal College requirements state that a resident has to spend three months out of a possible 60 months of residency doing research. Residents are able to do an intercalated M.Sc. or Ph.D. at their choosing as part of the Young Investigators Program.

Areas to Improve Program: More medical student electives. Greater exposure to PM&R in the undergraduate program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Acquired Brain Injury (combining exposure to stroke and traumatic brain injury rehabilitation). Spinal Injury (exposure to traumatic spinal cord and Multiple Sclerosis rehabilitation). Musculoskeletal (outpatient

ambulatory care rotation).

› **Other:** Electives in PM&R. Demonstrated interest in Neuromuscular and Musculoskeletal Medicine. Demonstrate an ability to function in a multidisciplinary setting.

Strengths: N/A

Other Key Features: N/A

Common Clinical Encounters: Acute and chronic pain. Musculoskeletal disorders: Arthritis, joint replacements and fractures. Work- and sports-related injuries. Congenital and perinatal disorders. Spinal cord injuries.

Workload: N/A

Research Expectations: One project over five years.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** PM&R.

› **Other:** Academic record demonstrating special proficiency in subjects related to the specialty. An elective in PM&R is strongly recommended. Obtain references from specialists in PM&R who can comment on proficiency and interpersonal skills.

University of Alberta

Strengths: Glenrose Hospital is the second largest comprehensive free-standing rehabilitation hospital in North America. We just finished accreditation in February 2011 and were given full approval for the next 6 years with no identified weaknesses in the program. This is the third consecutive time that this has happened when going through accreditation. There has been a strong historical interest in residency education from the preceptors. No resident has failed the certification exam in at least 15 years. We have the second largest residency program in the country with 10-14 residents. We have a very large residents room with excellent educational resources. Remuneration is the highest in the country for residents. There are 3 full-time pediatric physiatrists and including only one of 2 physicians in the country who have completed residencies in pediatrics and Physical Medicine and Rehabilitation. Residents get great exposure to interventional musculoskeletal procedures at a private facility run by physiatrists. There are currently four physiatrists associated with the institution and next year it will increase to six physiatrists. We have one of the country's best experts in use of botulinum toxin in the multi-disciplinary spasticity clinic. We have a large EMG/NCS lab that does some of the most difficult cases in the city and runs the multi-disciplinary brachial plexus clinic. The Current head of the CSCN is one of our physicians and 3 of the CSCN examiners for EMG/NCS come from our facility. Our residents have won 3 university awards for collegiality and contributions to medical education in the last 7 years.

Other Key Features: Our program is very flexible in meeting the individual interests of our residents. We are currently running a Pediatric Rehabilitation program and have already trained 3 residents from across the country. One of our MSK doctors is the team physician for the Edmonton Eskimos and Edmonton Oilers.

Common Clinical Encounters: Stroke, Brain Injury, Spinal Cord Injury, Complex pain management, Multiple sclerosis, Simple (carpal tunnel syndrome) and Complex neuromuscular disorders (ALS, myopathy, myasthenia gravis, polyneuropathy), Complex pediatric disorders (Muscular dystrophy, Spinal Cord Injury, Cerebral Palsy....), Amputee

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	8	1 in 4 (in house)
Second third of program	40	8	1 in 5 (home)
Final third of program	40	15	1 in 6 (home)

Research Expectations: Residents must complete a research program. 3 months of residency time are allotted for this.

Areas to Improve Program: There are no identified weakness on our last accreditation but we hold two retreats a year to talk about program improvement and development.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Rehabilitation is a very broad discipline that cuts across most aspects of medicine. I would usually suggest students get a feel for a wide variety of the different types of patient populations you will encounter to get a feel for the specialty.

› **Other:** N/A

University of British Columbia

Strengths: Neurological Rehabilitation, e.g., spinal cord injury, stroke, brain injury. Sports medicine for the disabled athlete — heavily involved in 2010 Paralympic Games. Electrodiagnostics (EMG). Dedicated group of staff committed to excellence in clinical management, teaching, and promoting research. Collegial environment among staff and residents.

Other Key Features: The program encourages a friendly, mutually respectful environment. We believe in the importance of communication, balance of professional and personal lives, and dedication toward professionalism. The program seeks to produce competent, well-rounded, and enthusiastic Physiatrists, not just residents who can pass the Royal College Specialty exam.

Common Clinical Encounters: Stroke, brain-injured, and spinal cord-injured patients from acute care through inpatient rehabilitation, community reintegration, and outpatient rehabilitation. Management of medical, social, and psychological issues. Management of acute and chronic pain and spasticity. Patients with multi-trauma. Sports injuries. Patients in the community with chronic disability or functional impairments.

Workload: First third of program: Mostly off-service rotations; one chapter of reading from a leading Rehab text per week; variable call, usually one in four. Second third of program: One- to three-month rotations in various aspects of Rehab Medicine; home call one week/month; more extensive reading, including journal articles, texts, and handouts. Final third of program: More elective time and more outpatient exposure; home call one week/month; more self-directed study.

Research Expectations: Residents are expected to produce at

least one project during their training that is of sufficient quality for submission for publication and/or for presentation at a major conference. From the second year onwards, residents have a half-day per week of dedicated academic time to work on their research project.

Areas to Improve Program: Annual resident “retreat” to evaluate the program and provide feedback to residency training committee. Continued evaluation of rotations. Ways to upgrade or improve rotations that might need change.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Two- to three-month elective in general PM&R. Any of Neurology, Rheumatology, Orthopedics, Sports Medicine, Geriatrics. Specific areas of PM&R, e.g., Brain Injury, Pediatric Rehab.

› **Other:** Demonstrate genuine interest in the field of PM&R. Have the desire to work with and improve the quality of life of people living with disabilities. Get as much exposure to the field as possible prior to applying to ensure that you have a good understanding of the field and its professional obligations.

University of Calgary

Strengths: Physiatry staff committed to teaching. All rotations can be done in Calgary, but there is ability to go off-site, especially for electives. Up to \$2,000 per year of financial assistance for residents to attend conferences.

Common Clinical Encounters: Stroke. Spinal cord injuries. Head injuries. Soft-tissue injuries/multiple trauma. Amputations.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40-45		1:4
Second third of program	40-45		1:4
Final third of program	40-45		1:4

Research Expectations: Must carry out a research project during the residency so that the results can be published or presented.

Areas to Improve Program: To develop a more coordinated amputee rotation.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** PM&R. Clinical Neuroscience-type elective. MSK-type elective.

› **Other:** PM&R elective is very helpful. Commitment to understanding and working in a team environment. Understanding of and interest in dealing with chronic disease, shown either through volunteer or other experiences.

University of Manitoba

Strengths: Musculoskeletal outpatient program. High degree of flexibility and options within the program. Dedicated clinical teachers. Excellent interdisciplinary programs, e.g., SCI, TBI, etc.

Other Key Features: Although the primary goal of the program is to ensure an excellent Physiatrist by its completion, we strive to encourage flexibility, creating the most useful program for you.

Common Clinical Encounters: Low back pain: mechanical, radiculopathies, spinal stenosis, etc. Subacute neurological rehabilitation: stroke, multiple sclerosis. Subacute spinal cord injury. Neuromuscular rehabilitation/EMG/NCS. Prosthetics and orthotics rehabilitation.

Workload: First third of program: Clinical 40–60 hours/week; academic 5–10 hours/week; reading: 2–10 hours/week; on call: 1:3 max.

Second third of program: Clinical 40–45 hours/week; academic 5–10 hours/week; reading: 2–10 hours/week; on call: 1:3 max., usually 1:4 or 1:5.

Final third of program: Clinical 35–45 hours/week; academic 5–10 hours/week; reading: 2–10 hours/week; on call: 1:3 max., usually 1:4 or 1:5.

Research Expectations: Completion of at least one research project.

Areas to Improve Program: Further develop stroke rehab program. Encourage research earlier in program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** PM&R: mandatory. Orthopedics. Neurology.

› **Other:** Elective in Psychiatry. Demonstrate relevant and useful experiences with neuromusculoskeletal issues and disabilities within medical and non-medical arenas. Develop a well-rounded, creative, versatile, and open-minded character.

University of Ottawa

Number of Reference Letters and Due Date: Three letters; due date as per CaRMS deadlines; one letter may be provided by a senior Psychiatry resident with whom the applicant has worked clinically; at least one reference should be from a Psychiatrist who has supervised the student clinically and knows the applicant well enough to comment on personal suitability for the specialty.

Personal Letter Information and Due Date: A personal letter should outline the applicant's interest in Psychiatry and understanding of what the specialty offers. Applicants should also indicate what aspects of Psychiatry they find most appealing and the attributes they possess that would make them good Psychiatrists in the future. Any specific reasons for applying to the University of Ottawa program should be indicated.

Strengths: Comprehensive education program. Our program is fully accredited by the Royal College of Physicians and Surgeons (RCPSC). Our five-year program offers all the essential medical, surgical, and Psychiatry clinical rotations required to meet the RCPSC training criteria. Also, subspecialty Psychiatry training is well represented and readily available, e.g., amputee rehab, spinal cord injury rehab, stroke and acquired brain injury rehab, chronic pain rehab, general musculoskeletal medicine, electrodiagnostic medicine cardiac rehab, respiratory rehab, and pediatric psychiatry. This ensures that our residents can complete their core training in Ottawa. Elective rotations may be completed at any accredited learning site. International electives are possible as well. Our faculty has embraced the RCPSC CanMEDS 2000 competencies. The seven essential roles are woven into the curriculum and into the clinical rotations. These roles are physician as advocate, communicator, collaborator, manager, medical expert, professional, and scholar. Many of

our faculty have strong interest and expertise in these roles. For example, Dr. Dojeiji and Dr. Blackmer are sought after locally and nationally for their expertise in communication-skills teaching and ethics, respectively. Our faculty has strong research and medical education interest and expertise. Many of our faculty have a Master's degree. Our program is flexible in meeting the needs of its residents. This is manifested by the way rotation schedules are coordinated annually. The core principle of our education program is open and consistent feedback. We expect that residents and faculty have regular feedback sessions on performance during clinical rotations. Also, residents receive feedback on their presentation skills. The entire education program is evaluated by the faculty and residents semi-annually. Residents receive formative feedback during a structured semi-annual practice exam. Our faculty is committed to this process. This principle has been one of the keys to our program's growth and success. This process was identified as a strength in our RCPSC accreditation review in January 2010.

Other Key Features: Our residents and faculty are the strength of our program. We are a diverse group with varied clinical and professional interests. Our group embraces and respects those differences. Our residents are active and willing participants in the growth of our program.

Common Clinical Encounters: Assistance with diagnosis and management of neck or back pain. Assistance with diagnosis of common peripheral neurological complaints presenting to an electrodiagnostic clinic, e.g., carpal tunnel syndrome, tardy ulnar palsy, cervical or lumbar radiculopathy. Assistance with rehabilitation for a patient with a stroke, amputation or spinal cord injury. Diagnosis and management of acute and subacute musculoskeletal disorders, e.g., knee pain in runners or participants in running sports (soccer, rugby, football). Assessment and prescription of an orthosis (brace) for footdrop. Wrist drop due to nerve palsy.

Workload: Again, the workload is quite variable and difficult to gauge. It depends entirely on the rotation and, to a lesser extent, the supervising faculty. Reading is dependent on the trainee. On-call follows PAIRO (Professional Association of Interns and Residents of Ontario) rules.

Research Expectations: All of our residents are expected to complete one research project in their area of interest during their five years of training. Completion of a research project is a program requirement. Projects are identified in the first two years of training. Assistance is provided in finding a suitable project and a research mentor. Residents are required to present updates on their projects annually at our Resident/Faculty Research Day. Master's training is possible within the five years of residency training. The resident must demonstrate excellent academic standing in order to pursue this training. A Master's research project or thesis completed during residency will also fulfill the research requirements of the program. A formal clinical investigator program is available to residents at the University of Ottawa. Criteria and requirements are available on the University of Ottawa Faculty of Medicine postgraduate Website (<http://www.medicine.uottawa.ca/postgraduate/eng>).

Areas to Improve Program: The most recent RCPSC review of our program (January 2010) indicated that we were a strong program with several strengths and no weaknesses. However, we are continually looking to improve our program by responding to resident feedback. As a specialty, we need to increase

undergraduate awareness of Physiatry so that we can attract interested and enthusiastic candidates. It still disheartens me to hear of students who graduate from four years of medical school who do not know what a Psychiatrist is or does. The demand for Physiatry is huge. There are many positions available for newly graduated Psychiatrists in Canada.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Outpatient Physiatry clinics with a broad range of clinical exposures from musculoskeletal medicine to acquired brain injury rehabilitation. This gives the student a flavour of the breadth of the specialty. This rotation improves the student's level of comfort with dealing with persons with disabilities and in identifying key rehabilitation and functional issues. An inpatient rotation in any area of rehabilitation. This helps the student see the type of work a Psychiatrist does in a hospital — interdisciplinary team-based work. An inpatient rotation in stroke, acquired brain injury, spinal cord rehabilitation, etc. This experience highlights the nature of the specialty best.

› **Other:** Be yourself — genuine interest and enthusiasm in our specialty come across quite readily during elective rotations and interviews. Excellent communication and collaborative skills are essential in our specialty. This must come across in your reference letters, rotation evaluations, and personal letters. Have a proven interest in Physiatry. This is usually demonstrated by elective and selective rotations in Physiatry. Some students have done summer research placements with Psychiatrists.

This is not an essential admission criterion, however.

University of Saskatchewan

Number of Reference Letters and Due Date: Three.

Personal Letter Information and Due Date: As per CaRMS.

Strengths: Strong clinically based residency program, especially in the field of Neurorehabilitation. Leader in the field of Multiple Sclerosis with the MS clinic associated with our department. The department also has an affiliation with the MS Cameco Neuroscience Centre performing basic science research. Flexibility regarding program rotations as well as holidays.

Other Key Features: We have a very collegial program in which the residents and consultants get along very well. There is strong support for the resident program among attending staff, an excellent half day, a strong adult learning model, and good patient exposure. The residents are also a close-knit group that frequently organizes activities outside of work. The program is conducive to learning and also allows residents to lead well-balanced lives.

Common Clinical Encounters: Consultations regarding stroke rehabilitation, traumatic brain injury, spinal cord injury, and trauma. Outpatient clinics including orthotics and prosthetics. Diagnosis of neuromuscular diseases including an electromyography lab. Spasticity management including Botox injections and Baclofen pumps. Clinics involving patients with chronic pain and tertiary rehab problems.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	30	10	1 in 4
<i>Second third of program</i>	30	10	1 in 3 home call (weekly)
<i>Final third of program</i>	30	10	1 in 3 home call (weekly)

Research Expectations: Three months of research in the third or fourth year.

Areas to Improve Program: Increase the amount of research in our program. Increase our focus on sports medicine and MSK clinics.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Electives in Physical Medicine and Rehabilitation, Neurology, Orthopedics.

› **Other:** Perform an elective in our field. Enter an essay or research project in the Canadian Association of Physical Medicine & Rehabilitation contests. Gain exposure to Physical Medicine & Rehabilitation through reading PM&R textbooks.

University of Toronto

Strengths: Diversity of clinical institutions and staff. (Toronto Rehab, West Park, Bridgepoint Health, St John's Rehab Providence.) >35 staff engaged in teaching — academic centres and community-based practices. >15 new staff recruits into academics in the past eight years. Increased involvement of staff at undergraduate and post-graduate level. Journal Club monthly and structured approach to critical appraisal.

Other Key Features: Research collaboration with acute care hospitals/scientist is growing every year. Educational program expanding at undergraduate with six lectures delivered by Psychiatrist. Post-grad activity increasing greatly with number of residents growing by 33% (to 15 residents from 10). Royal College of Canada accreditation in 2007 — full approach for six more years. Protected academic half day on Friday morning includes anatomy sessions in the summer. Staff grand rounds seven times/year.

Common Clinical Encounters: Stroke acquired brain injury, spinal cord injury, complex musculoskeletal disorders (including polytrauma), amputee rehab, cardiac and respiratory rehab, (complex) pain rehab, geriatric medicine, sports medicine, peripheral nerve disease (entrapment, radiculopathies), auditis management.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	8	4-8	1 in 4
<i>Second third of program</i>	16	8-16	None to 1 in 10
<i>Final third of program</i>	24	8-16	None to 1 in 10

Research Expectations: One manuscript ready research project. Presentation of progress yearly. One quality assurance project — presentation to local area that quality project is related to as well as to other faculty and resident at Quality presentation day.

Areas to Improve Program: Consolidation of recertification improvements and EMG rotations. Enhancement of neuromuscular inpatient program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** All Toronto Rehab Institute/West Park experiences are excellent and well suited for residency application/exposure. Residency program members across Canada all know one another, hence letter of reference are important but exposure in different cities only help applicants rather than hinder. Go try other programs to make an informed choice.

› **Other:** Fun, young, dynamic staff that are eager to teach and train young resident.

University of Western Ontario

Strengths: Small — close contact between staff and residents. Good group of consultants — interested in educating and training residents.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	55	10	1 in 3-4
Second third of program	40-50	20	1 in 3-4 (home)
Final third of program	40-50	15-20	1 in 3-4 (home)

Research Expectations: One article that is manuscript ready of original work.

Areas to Improve Program: We are a young program — need time, more experience and new faculty to help us to evolve.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** PMR, neuro and ortho all valuable. Elective (2 weeks) with us is valuable.

› **Other:** Strong interest in rehab/neuro MSK disorders. Reference letter from PMR consultant. Elective with us is very important.

Programs Not Responding

McMaster University

Université de Montréal

Université Laval

PLASTIC SURGERY

Description of Specialty

The term “plastic” is derived from the Greek word “plastikos,” which means to mould or shape. Many of the first plastic surgeries involved the formation of a skin flap over a wound or tissue loss, to reshape or mould the defect so that it approximated the original shape. Currently, plastic surgery is performed on abnormal structures of the body, caused by congenital defects, developmental abnormalities, trauma, infection, tumours, or disease. It is generally performed to improve function, but may also be done to approximate a normal appearance. Cosmetic surgery is performed to reshape normal or uninjured structures of the body in order to improve the patient’s appearance and self-esteem. Plastic Surgeons can follow a diverse range of career paths, including burns, wound healing, hand surgery,

craniofacial surgery, head and neck reconstruction, oncologic reconstruction, cosmetic surgery, and education.

Overview of Program

All programs in Plastic Surgery are five years in duration. In general, PGY1 and 2 deal with core training in surgery followed by three years of resident training in Plastic Surgery, including one year of senior residency. In addition to training in Plastic Surgery, the resident must be trained in the principles and practice of surgery. During the two years of training in core surgery, the resident must gain experience and proficiency in the care of surgical emergencies, including trauma, the management of problems in pre- and postoperative care, shock, fluid balance and nutritional support, system support, and surgical intensive care. Such experience may be obtained in General Surgery service. However, it is desirable that the resident augment this experience with training relevant to Plastic Surgery during rotations on such specialty services as Orthopedics, Neurosurgery, Otolaryngology, Vascular Surgery, and Urology.

The specific training objectives with respect to knowledge base, clinical skills, technical skills, and attitudes are defined by the Royal College of Physicians and Surgeons of Canada (RCPS(C)).

Fellowships offered without Royal College status:

- › Breast Reconstruction
- › Burns
- › Craniofacial Surgery
- › Hand/Upper Extremity Surgery
- › Microsurgery
- › Pediatric Plastic Surgery
- › Trauma/Reconstructive Surgery

2010 Quota – Total Positions 28

	Quota	IMG Quota
Dalhousie University	2	–
McGill University	1	–
McMaster University	3	–
Memorial University	–	–
Queen’s University	–	–
Université de Montréal	2	–
Université de Sherbrooke	1	–
Université Laval	2	–
University of Alberta	3	–
University of British Columbia	2	–
University of Calgary	2	–
University of Manitoba	2	–
University of Ottawa/Université d’Ottawa	1	1
University of Saskatchewan	1	–
University of Toronto	4	1
University of Western Ontario	2	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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McGill University

Strengths: Hand Surgery, Microsurgery, Pediatric Plastic Surgery.

Other Key Features: Applicants should be prepared. Background information is available to candidates.

Common Clinical Encounters: Cleft lip and palate patients, Facial fractures, Craniofacial abnormalities, Trauma — soft tissue and bony defects, burns in children.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	3 rotations	structured	9
Second third of program	3 rotations	structured	9
Final third of program	3 rotations	structured	9

Research Expectations: None in 1st year. Research is voluntary. Master's level: Surgeon-Scientist Program available for M.Sc. Program (1–2 years); Doctorate or higher: Surgeon-Scientist Program available for Ph.D. Program (2–3 years).

Areas to Improve Program: More operating time. Interdisciplinary upper-extremity program.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Orthopedics, Ophthalmology, Head & Neck Surgery.
- ▶ **Other:** Candidates wishing to be successful are encouraged to have a strong background in education, community or international interests, and strong references.

University of Alberta

Strengths: Exposure to full breadth of cases. Staff dedicated to teaching. Ample OR experience.

Other Key Features: Very tight-knit group of staff, all of whom enjoy resident interaction and training.

Common Clinical Encounters: Hand trauma, craniofacial trauma, cancer reconstruction, burn trauma and reconstruction, pediatric surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	70-80	10	N/A
Second third of program	80	20	N/A
Final third of program	80	10-15	N/A

Research Expectations: Maximum one research project per year, Master's level, doctorate, or higher level training available.

Areas to Improve Program: Increase exposure to cosmetic surgery. Develop a dry lab.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** General Reconstructive Plastic Surgery, Burn Care and Reconstruction, Hand and Wrist.
- ▶ **Other:** Candidates wishing to be successful must be honest, hard-working and easy to get along with, show an interest in the field and in research, and have taken the appropriate electives.

University of British Columbia

Strengths: Large clinical surgical volume covering all aspects of plastic surgery. Extremely cohesive/committed attending

staff supervisors. Resident cosmetic surgery clinic.

Other Key Features: All program materials are on the CaRMS Website.

Common Clinical Encounters: Hand trauma, facial trauma, immediate breast reconstruction, lower extremity reconstruction, pediatric cleft lip and palate.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	55	5	1:4
Second third of program	55	5	1:4
Final third of program	55	5	1:4-5

Research Expectations: Clinical research is done each year.

Areas to Improve Program: Increase flexibility of training program rotations. Increase training to six years to allow more elective time.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Pediatrics, Trauma/Burns, Breast Reconstruction.
- ▶ **Other:** Candidates wishing to be successful must be in good academic standing, have excellent clinical rotation evaluations, and provide excellent references.

University of Manitoba

Strengths: Dedicated burn unit. More than 350 microsurgery cases per year. One-on-one student–staff apprenticeship model of teaching. Clinical research opportunities.

Other Key Features: Dedicated staff has developed a very collegial work environment that results in a close relationship between staff and resident. This enhances the operative experience and extends to research and conferences.

Common Clinical Encounters: Craniofacial trauma.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	>8 1/2	As needed	<10
Second third of program	>8 1/2	As needed	<10
Final third of program	>8 1/2	As needed	<10

Research Expectations: Increasing clinical research is being facilitated by our new director of resident research. While no research is mandatory, it is highly encouraged and financially supported for national and international presentations.

Areas to Improve Program: In the past five years, five new surgeons have joined the Academic staff. Still, we are actively recruiting excellent surgeons to add depth and breadth to our surgical team. Development of an upper limb program in conjunction with orthopedics is in progress.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Orthopedic hand/wrist.
- ▶ **Other:** Candidates wishing to be successful are encouraged to come for an on-site visit, demonstrate interest in Plastic Surgery, and have enthusiastic personalities.

University of Toronto

Strengths: Internationally recognized faculty, large and diverse exposure to clinical cases, surgeon scientist program, integrated academic curriculum.

Other Key Features: Multiple training sites throughout Toronto, Exposure to research in education, epidemiology, basic science and clinical science, Unique exposure to a large number of fellow residents as well as clinical fellows from throughout the world, resident aesthetic surgery program.

Common Clinical Encounters: Pediatric plastic surgery, oncologic reconstruction, hand and upper extremity, burn surgery, aesthetic surgery, craniofacial surgery, post traumatic reconstruction.

Workload:

Clinic avg of 12-15 hrs per week OR avg of 20-25 hrs per week.
Formal Teaching avg of 5 hrs per week.
Call typically 1 in 3 from home.

Research Expectations: all residents are expected to complete three resident research projects during their five year program. Formal research is available for suitable candidates through the Surgeon Scientist Program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Electives at the University of Toronto are not required but are strongly encouraged. Our program is looking for dedicated hard working individuals who show promise of becoming outstanding clinicians and/or researchers.

Programs Not Responding

Dalhousie University

McMaster University

Université de Montréal

Université de Sherbrooke

Université Laval

University of Calgary

University of Western Ontario

PSYCHIATRY

Description of Specialty

Psychiatry involves the assessment, diagnosis, and treatment of persons with mental illnesses and emotional or behavioural disorders. Practice may be based in the community hospital, academic or research institution, or individual private practice, with the nature of the specialty varying with the environment. The range of options entails treating psychiatric inpatients in a hospital setting, offering psychotherapy in private practice, implementing community outreach programs, and conducting

full- or part-time research and teaching. Generally, a holistic approach is utilized whereby patients, family members, and additional health care professionals make important contributions. In addition to General Psychiatry, one may train in the subdisciplines of Child/Adolescent Psychiatry, Geriatric Psychiatry, Forensic Psychiatry, Addiction Psychiatry, Mood and Anxiety Disorders, Psychosomatic Medicine, Schizophrenia, Women's Mental Health, Gender Issues and Culture, and Community and Health.

Overview of Program

Over the course of five years of approved residency training, one year of basic clinical training is required, preferably including Medicine, Neurology, and Psychiatry. Three years of approved residency in Clinical Psychiatry are also required, with mandatory periods as follows: at least one year of adult General Psychiatry; at least six months devoted entirely to the psychiatric care of children, adolescents, the mentally retarded, and their families; and at least six months devoted entirely to the study, comprehensive care, and rehabilitation of chronically psychotic patients. One year of approved training may be spent in either General Psychiatry, a psychiatric subspecialty, or full-time study of a related basic science (such as Neuroanatomy, Neurophysiology, Psychology, or Anthropology), and one year may be spent in an approved residency training program relevant to Psychiatry (such as Internal Medicine, Neurology, or Pediatrics) or research.

Accreditation without certification:

› Clinical Pharmacology

Fellowships offered without Royal College status:

- › Addiction
- › Child and Adolescent
- › Forensic
- › Geriatric
- › Psychosomatic Medicine

2010 Quota – Total Positions 148

	Quota	IMG Quota
Dalhousie University	6	1
McGill University	9	–
McMaster University	6	1
Memorial University	5	2
Queen's University	3	2
Université de Montréal	12	–
Université de Sherbrooke	8	–
Université Laval	11	–
University of Alberta	8	–
University of British Columbia	20	2
University of Calgary	7	–
University of Manitoba	7	–
University of Ottawa/Université d'Ottawa	8	2
University of Saskatchewan	6	–
University of Toronto	27	2
University of Western Ontario	5	2

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Strong resident group. Excellence in clinical training. Broad range of training opportunities. Psychotherapy training.

Other Key Features: Extensive electives opportunities including electives in International Psychiatry offered abroad. Comprehensive training preparing residents to practice as independent specialists in any type of setting. Fellowship training in several subspecialties. Dalhousie is a leading centre for research and treatment of brain-based illness in Canada with nationally and internationally recognized faculty. Nova Scotia is one of the most desirable locations to live in Canada.

Common Clinical Encounters: First episode psychosis in young individuals. Broad range of psychiatric illness in the elderly. Child and adolescent psychiatry.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	5	1:7
Second third of program	40	5-10	1:7
Final third of program	40	10	1:10

Research Expectations: Each resident is expected to complete a research project. This is to be done over the four years of residency and result in a manuscript of publishable quality and presentation at Departmental Research Day. Residents are paired with supervisors of their choice. Teaching of research methodology, biostatistics, experimental design, and literature appraisal are part of didactic curriculum.

Areas to Improve Program: Continue to attract excellent residents to the program. Expand training in Addictions Psychiatry.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Any elective in Psychiatry or relevant areas which help the student to understand the specialty and feel comfortable with the choice. Ability to work in a team.

› **Other:** Residents will spend part of the training in Saint John, New Brunswick.

McGill University

Strengths: We offer eclectic training experiences in an academic environment. The program is flexible, and geared to help trainees achieve their goals. There is a wide network of accredited training sites and many elective opportunities. Incoming residents participate in our one-on-one Mentorship Program. Residents may participate in a Research Track that begins in the first year. In addition there are numerous opportunities to carry out research projects part or full-time throughout the residency. The program has a long tradition of excellence in psychotherapy training. There is a well developed preparation course for the Royal College exams. There is a high level of resident participation in all aspects of program development and functioning.

Other Key Features: Several concurrent programs exist that can enrich your Psychiatry Training at McGill*: 1. A Masters Degree in Psychiatry providing advanced research training. 2. A Fellowship in Medical Education completed during the 5 year Psychiatry Program. 3. The Humanitarian Studies Initiative for Residents (HSIR) offering structured training and exposure to international and humanitarian work. 4. A diploma in Child and Adolescent Psychiatry completed within the 5 year program. 5. A certificate in Geriatric Psychiatry completed within the 5 year program.

* Additional training programs that overlap with the 5 year Psychiatry Program:

1. Sub-specialty training in Child and Adolescent Psychiatry scheduled to begin 2012
2. Sub-specialty training in Geriatric Psychiatry scheduled to begin 2012
3. A two-year Clinician Investigator Program (CIP)
4. A Royal College Program in Clinical Pharmacology

Common Clinical Encounters: N/A

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	9 a.m. - 5 p.m. work day, includes an academic half-day	N/A	4/month, ends at 11 p.m.
Second third of program	9 a.m. - 5 p.m. work day, includes an academic half-day	N/A	4/month, ends at 11 p.m.
Final third of program	9 a.m. - 5 p.m. work day, includes an academic half-day	N/A	4/month, ends at 11 p.m.

Research Expectations: A basic level of academic development is included in the standard program. Many opportunities exist to develop further expertise in research or academic activities.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** N/A

› **Other:** N/A

McMaster University

Strengths: Committed Program Director and faculty. Ongoing evaluation process of the program by appropriate committee. Innovative programs with strong leadership. McMaster now has two Psychiatry Residency Programs. The Hamilton program, as well as the Waterloo Regional Campus program which tailors training to prepare residents for community based practice outside of a large, academic setting, including practice in a community general hospital.

Other Key Features: We have several outstanding sub-programs: Child and Family Program, Psychotherapy Program, Clinical Investigators Program, Mood Disorders Program, Forensic Psychiatry, Geriatric Psychiatry. 1st episode psychosis and many General Adult Psychiatry programs. We also have several outstanding seminar series, including Interview Skills, Psychopharmacology, Community Psychiatry, Psychotherapy and Royal College Exam preparation sessions.

Common Clinical Encounters: Inpatient Psychiatry. Outpatient Psychiatry. Emergency Psychiatry. Consultation Psychiatry. Child Psychiatry. Geriatric Psychiatry. Collaborative Care. Addiction Psychiatry.

Workload: N/A

Research Expectations: Resident research is encouraged but not required. The program actively supports and protects the time of residents who wish to conduct their own research or participate in faculty members' research. Residents pursuing research interests may take elective time during their training to develop their projects.

Areas to Improve Program: Increase exposure to addictions training.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Psychiatry. Neurology. Internal Medicine.
- › **Other:** A commitment to evidence-based medicine and work with the seriously mentally ill. An interest in psychiatric care in underserved regions and underserved subspecialties. An interest in basic or clinical research is preferred, but not essential.

Queen's University

Strengths: The Residency Program Committee has developed a Portfolio Manager roles with clearly defined tasks. The Department has recruited a number of new faculty members who are involved in postgraduate education and clinical supervision.

The PGY 2 General Adult Psychiatry core year has been designed to include Addictions and Emergency psychiatry training. Our Program provides 2 blocks of mandatory Shared Care rotations with Family Health Teams. Curriculum Portfolio within the RPC has implemented major changes in the core curriculum and structure of the academic day in light of the new RCPSC guidelines.

A Departmental Faculty Development Committee was established in October 2010. The focus is to provide professional development in research, education and leadership. An Interprofessional Committee now provides direction to ensure all faculty benefit from professional development.

The Program Director has a dedicated, experienced Program Assistant who is essential in providing administrative support to the program. The Program Director is a member of the Academic Affairs Committee and is supported by the Department Head and the Department Council to allow smooth operation and delivery of a quality program. The financial support for the Program is provided through the budget designed in cooperation with the Departmental Finance committee.

Other Key Features: Our Program has 22 residents. PGY 2 and 3 years are considered core years for psychiatric training, divided into clinical rotations based on the Royal College requirements. Our residents have protected academic time one day a week from 1030 to 500 p.m - this time consists of core teaching seminars, interviewing skills or PDM (OSCE stations) practices and psychotherapy teaching.

Common Clinical Encounters: Residents are exposed to a variety of psychiatric patients: acute general psychiatry at Hotel Dieu and

Kingston General Hospital as well as chronic patients at Providence care -MHS and through their work with the ACTT teams. Addictions training is available with the Street Health and Options for change and shared care experiences through collaboration with the family health teams.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	4.5 days per week	academic 2/3 day	depends on the rotation, approximately 4-5/month
<i>Second third of program</i>	4.5 days per week	academic 2/3 day	3-4/month
<i>Final third of program</i>	4.5 days per week	academic half day	3-4/month

Research Expectations: One mandatory scholarly project presented at the Research day during residency.

Areas to Improve Program:

- a. Move to the approved inpatient psychiatry unit at Kingston General Hospital and transition to 6 month blocks of inpatient and outpatient psychiatry training in PGY 2. The Department of Psychiatry has remained vigilant in its efforts to ensure a well planned, successful move.
- b. Although there is a complement of teachers committed to excellence in postgraduate education, we need to continue to work on clarifying each individual's academic responsibilities.
- c. There continue to be challenges in the Consultation Liaison Division. The Department Head and his advisory committee are exploring solutions.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Mood Disorders, Addictions, Emergency psychiatry, High intensity treatment team.
- › **Other:** N/A

University of Alberta

Strengths: Strong clinical and didactic teaching. Depth of clinical resources, including all age groups and subspecialties. Flexible, diverse electives.

Other Key Features: Please see the CaRMS Website for more detail regarding our program.

Common Clinical Encounters: Schizophrenia. Bipolar disorder. Personality disorders. Depression. Anxiety disorders.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	40-50	10	1:5
<i>Second third of program</i>	40-50	10	1:6
<i>Final third of program</i>	40-50	10	1:7

Research Expectations: There are many opportunities to do research, including Master's and Ph.D. work. All residents are expected to have some exposure to research (Grand Rounds presentations, critical appraisal of research papers, etc.).

Areas to Improve Program: Lack of emergency room experience has been a weakness in our program and is being addressed. Addictions Psychiatry has also been a weakness, and a new Psychiatrist has been recruited in this field.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** General Adult Psychiatry. Geriatric Psychiatry. Child Psychiatry.

› **Other:** Electives and/or research in field of Psychiatry. Develop a solid knowledge of general medicine.

University of British Columbia

Strengths: Sound grounding in core training, with opportunities for research. Full-day academic program. Diverse experiences for electives.

Other Key Features: We wish to select the very best candidates for our program. We DO NOT select only candidates from our own undergraduates; we hope to attract the best and the brightest from across Canada.

Common Clinical Encounters: Schizophrenia. Mood disorders. Psychiatric emergencies. Child Psychiatry. Substance use/dual diagnosis.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	28	6	~1/10
Second third of program	29	6	~1/10
Final third of program	29	6	~1/10

Research Expectations: Residents are encouraged to participate in research from the start, but it is not compulsory.

Areas to Improve Program: Drug and alcohol/substance use training. More time for delivering Psychotherapy.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Psychiatry. Neurology. Internal Medicine.

› **Other:** Demonstrate a mature, caring, and responsible interpersonal stance. Perform well in medical school in both work and play. A desire to be trained with the best colleagues available.

University of Manitoba

Strengths: Psychotherapies and subspecialty training (Forensics, Child & Adolescent Psychiatry, Psychogeriatrics). Collegial, collaborative relationship between faculty and residents. Superb, state-of-the-art facility.

Other Key Features: Community Psychiatry Program involves regular visits to local community clinics or trips to the Arctic accompanied by faculty.

Common Clinical Encounters: Mood disorders. Psychotic disorders. Child & adolescent Psychiatric syndromes. Personality disorders. Anxiety disorders.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	30-35	3-6	6-10
Second third of program	30-35	3-6	6-10
Final third of program	25-30	10-15	4-8

Research Expectations: Research is mandatory and each resident is expected to produce one publishable paper that meets the CPA guidelines for publication. Presentations at Annual Resident Research Day strongly encouraged.

Areas to Improve Program: Enhance addictions training. Enhance Interpersonal Psychotherapy training.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Psychiatry. Neurology. Addictions Medicine. Developmental Pediatrics.

› **Other:** Take relevant electives. Develop strong interpersonal and communication skills and demonstrate these in the interview. A demonstrated interest in Psychiatric training via education experiences, courses, and an exposure to the mental health field via volunteer work or related paid employment.

University of Saskatchewan

Strengths: High-quality training and faculty. Funded six-month, out-of-province elective. Residents are valued and respected.

Other Key Features: There is one entire day per week of protected academic time. There are also five additional days of protected academic time per six months for scholarly work or study.

Common Clinical Encounters: Depression. Anxiety disorders. Bipolar disorder. Schizophrenia. Alcohol abuse and dependence.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	8	2-3	1/7
Second third of program	8	2-3	1/9
Final third of program	8	2-3	1/11

Research Expectations: We expect a junior research project completed by April PGY3, and a senior research project completed by April PGY5.

Areas to Improve Program: Increase the number of residents in our program. Increase elective opportunities; more faculty needed for this.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Internal Medicine. Neurology. Pediatrics.

› **Other:** Genuine interest in Psychiatry, and commitment, as it is hard work. Mature personality. Sense of responsibility and ability to take initiative.

University of Toronto

Strengths: Diversity of clinical institutions and depth of training: General Psychiatry to subspecialty (e.g., Neuropsychiatry). Opportunities for parallel training: clinician-scientist, clinician-educator, underserved areas. Resident involvement at all levels of program development, social opportunities to curriculum. staff. (Toronto Rehab, West Park, Bridgepoint health, St John's Rehab, Providence). >35 staff engaged in teaching - academic centres and community based practices. >15 new staff recruits into academics in the past 8 years. Increased involvement of staff at undergraduate and post-graduate level. Journal Club monthly and structured approach to critical appraisal.

Other Key Features: Research collaboration with acute care hospitals/scientist is growing every year. Educational program expanding at undergraduate with 6 lectures delivered by psychiatrist. Post-grad activity increasing greatly with number of residents growing by 50% (from 10 to 20 residents). Royal College of Canada accreditation in 2007 - full approach for 6 more years. Protected academic half day on Friday morning includes anatomy sessions in the summer. Staff grand rounds 7 times/year.

Common Clinical Encounters: Stroke, acquired brain injury, spinal cord injury, complex musculoskeletal disorders (including polytrauma), amputee rehab, cardiac and respiratory rehab, (complex) pain rehab, geriatric medicine, sports medicine, peripheral nerve disease (entrapment, radiculopathies).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	8	4-8	1 in 4
Second third of program	16	8-16	1 in 10 or less
Final third of program	24	8-16	1 in 10 or less

Research Expectations: One manuscript ready research project. Presentation of progress yearly. One quality assurance project - presentation to local area that quality project is related to as well as to other faculty and resident at Quality presentation day.

Areas to Improve Program: Consolidation of EMG rotation. Enhancement of neuromuscular inpatient program.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** All Toronto Rehab Institute/West Park experiences are excellent and well suited for residency application/exposure. Residency program members across Canada all know one another, hence letter of reference are important but exposure in different cities only help applicants rather than hinder. Go try other programs to make an informed choice.

› **Other:** Fun, young, dynamic staff that are eager to teach and train young resident.

University of Western Ontario

Strengths: Small but comprehensive training program, flexible to individual training choices. Innovative PGY1 year with academic Thursdays year-round. Many opportunities for individual attention and supervision.

Other Key Features: The PGY1 year includes a full month of orientation and three additional months of Psychiatry. The child/adolescent program is consistently strong. Comprehensive programs in Neuropsychiatry, Trauma, Psychotherapy, Mood, Anxiety Disorders, Schizophrenia Treatment and Research, and Dual Diagnosis Developmental Disorders; also programs in Forensics and in Addictions. A shared care program is being initiated. Residents are freed from clinical work on Thursdays to attend seminars and lectures on research.

Common Clinical Encounters: Anxiety, mood disorders. Substance misuse and induced conditions. Psychotic disorders. Adjustment disorders and psychological trauma. Personality disorders.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	35	5	10
Second third of program	40	5	10
Final third of program	45	7	10

Research Expectations: Research is not mandatory, but is encouraged. There are various funding opportunities for resident research and qualified faculty to assist. Some residents complete a Master's degree during their training. There is lots of support and flexibility in this respect.

Areas to Improve Program: We are developing a protocol to improve and strengthen the education experience for Psychiatry residents in the ER. We are expanding opportunities for ambulatory, community experiences in Adult Psychiatry.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Emergency Psychiatry. General Adult Psychiatry (hospital or community-based). Child/Adolescent Psychiatry.

› **Other:** Demonstrate a genuine interest in Psychiatry. Write a strong personal letter. Demonstrate good interpersonal skills and professionalism.

Programs Not Responding Memorial University of Newfoundland

Université de Montréal

Université Laval

University of Calgary

University of Ottawa

University of Ottawa – NOSM Stream

RADIATION ONCOLOGY

Description of Specialty

Radiation Oncology is a branch of Clinical Medicine that utilizes ionizing radiation to treat patients, most often those with cancer. Radiation Oncologists are an integral part of the multidisciplinary management of a cancer patient and must collaborate closely with other Oncologists, Radiologists, and other Physicians in related disciplines.

Overview of Program

In Canada, all Radiation Oncology programs are five years in duration. The first year is generally a broad-based clinical year, with rotations in specialties that could include Surgery, Gynecology, Pediatrics, Hematology, Oncology, and ENT. Following this year, some programs have extra training in Internal Medicine and opportunities for electives. Three or more full years are devoted to Radiation Oncology training, with rotations based either on tumour site or preceptor. Didactic/academic teaching about Oncology, Physics, and other related topics is an important part of the programs. Also, research is a recommended or mandatory component of the programs. There are often opportunities for interprovincial or international electives.

Fellowships offered without Royal College status:

- › Brachytherapy
- › Gynecologic Radiation Oncology
- › Head and Neck Radiation Oncology
- › Intensity Modulated Radiotherapy
- › Pediatric Radiation Oncology
- › Proton Beam Radiotherapy
- › Stereotactic Radiotherapy

2010 Quota – Total Positions 25

	Quota	IMG Quota
Dalhousie University	1	–
McGill University	2	–
McMaster University	2	–
Memorial University	–	–
Queen's University	2	–
Université de Montréal	2	–
Université de Sherbrooke	–	–
Université Laval	2	–
University of Alberta	2	–
University of British Columbia	2	–
University of Calgary	1	–
University of Manitoba	1	–
University of Ottawa/Université d'Ottawa	2	–
University of Saskatchewan	–	–
University of Toronto	4	1
University of Western Ontario	2	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

Dalhousie University

Number of Reference Letters and Due Date: Three reference letters; due date as per CaRMS deadlines.

Personal Letter Information and Due Date: Personal letter mandatory; due date as per CaRMS deadlines.

Strengths: Excellent one-to-one teaching from staff Radiation Oncologists and physicists. Multidisciplinary clinics and tumour boards/conferences that facilitate resident learning. There are well-structured. Formal teaching, sessions (academic half day, resident rounds), including physics, radiobiology, and clinical oncology. There are opportunities to attend conferences and courses in PGY3, PGY4, and PGY5.

Other Key Features: Dalhousie accepts one resident per year; the small program allows great flexibility, one-to-one teaching, and hands-on clinical experience. (11 Radiation Oncologists + 8 Medical Physicists). There is a Resident Longitudinal Clinic in PGY5.

Common Clinical Encounters: Breast cancer adjuvant radiation consults and treatment. Prostate cancer consults and treatment. Lung cancer consults and treatment. Head and neck cancer consults and treatment. Palliative radiation of all tumour sites.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	5-10	1 in 4
Second third of program	40	10-15	1 in 4
Final third of program	40	15-20	Reduced

Research Expectations: Mandatory completion of one project but ideally two projects between last half of PGY2 and PGY5. There are mentors, supervisors, and protected time to do research. Residents have been very successful in completing research projects in recent years.

Areas to Improve Program: Improved communication with University based basic scientists.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Radiation Oncology. Palliative Care. Medical Oncology.

› **Other:** Do electives in Radiation Oncology. Demonstrate in medical school that you are hard-working and want to pursue Radiation Oncology as a specialty. Maintain your hobbies, interests, and fun activities to show you are a well-rounded person who can balance the demands of residency and personal life.

McGill University

Strengths: Well-structured teaching program consisting of: 15 Radiation Oncologists, four fellows and 20 residents. Very strong medical physics program. State-of-the-art equipment and technology, including Tomotherapy, High-dose-rate Brachytherapy, CT and MRI Planning Systems, Image-guided Radiotherapy. The residents are exposed to a large patient population with a wide range of common and less common clinical situations. support program development and resident training. Large patient population allowing good exposure to common and less common clinical situations.

Other Key Features: Highly competitive program with emphasis on research both at the clinical and basic sciences level.

Common Clinical Encounters: Breast, Prostate, Lung, Gastro-intestinal, and Head and Neck cancer.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	45	10	1/4 wks
Second third of program	45	10	1/9 wks
Final third of program	45	10	1/9 wks

*Rotate off service in 1st year.

Research Expectations: A minimum of one research project is expected, which will lead to presentation at a scientific meeting and/or a publication. Many opportunities for research are available.

Areas to Improve Program: Structure teaching activities already given on a two-year cycle so trainees review all tumour sites twice during residency. Complete CT Web-based teaching modules to allow the trainees to review Physics and Radiobiology courses.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Radiation Oncology. Medical Oncology. Palliative Care or Surgical Oncology.
- ▶ **Other:** Manifest good aptitude to work in a team and an interest in research.

McMaster University

Strengths: Medium-sized program enables equal opportunities to all residents. Opportunity for clinical and evidence-based research—residents have won prizes for their research. Dedicated and supportive teaching staff/mentors.

Other Key Features: McMaster has pioneered Evidence-Based Research; hence, residents have ample opportunities to get involved in clinical research. Our centre has dedicated teachers and excellent clinicians committed to the training of residents. Collegial atmosphere.

Common Clinical Encounters: Diagnosis, management, and treatment of common malignancies. Clinical examination of body parts/systems for malignancy (H&N, ENT, Gyn, etc.). Communicating diagnoses and prognoses to patient and family. Palliative treatment (e.g., management of bone pain, spinal cord compression). Health advocacy—advising patients/families about risks of developing cancer and measures for decreasing those risks (e.g., smoking and cancer).

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	30-35	15-20	1 in 5
Second third of program	25	20-25	1 in 5
Final third of program	20-25	25	N/A in last six mos

Research Expectations: At least one project for publication/presentation at a national meeting. There are mentors, supervisors, and protected time to do research. Master's level and/or doctorate level research is not required, but Master's can be done as a two-year fellowship after residency.

Areas to Improve Program: Adequate funding to let the residents attend conferences/other educational activities. Adequate office space for residents.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Radiation Oncology (32 weeks). Oncology-related specialties (Medical Oncology, Hematology, Palliative Care, etc). Diagnostic Radiology.
- ▶ **Other:** Good communication skills. Should feel comfortable with technology (computers).

Queen's University

Strengths: Small program focused on individual residents. One-to-one teaching. Strong research program.

Other Key Features: Research program is a real strength. Opportunities to do electives elsewhere. Resident input actively sought and listened to with respect to program development.

Common Clinical Encounters: This is a difficult question, as cancer is actually many different diseases. Residents will rotate through various tumour sites/preceptors, gaining experience in all malignancies. The most common cancers are breast, lung, prostate, and GI, but the residents do not spend all of their time in these areas. There is typically a balance between consult clinics, follow-up, treatment planning, and treatment review clinics. There is some inpatient care, but the program is based in an ambulatory care setting.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40-50	15	1:5-1:6
Second third of program	40-50	15	1:5-1:6
Final third of program	40-50	Exam prep	2nd call

Research Expectations: None in 1st year. Residents are expected to complete one small (outcomes) research project and one larger project. Master's level and doctorate opportunities are available as a fellowship after residency.

Areas to Improve Program: Recruit one to two more staff. Greater contribution to the national meeting.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Radiation Oncology in Kingston or elsewhere. Ivan Smith Summer Studentship or other Oncology studentship.
- ▶ **Other:** Spend time in the field. Have an understanding of all team players and their contributions. Have an awareness of what the daily activities of a Radiation Oncologist might be.

University of British Columbia

Strengths: Large program with excellent track record. Large number of patients and exposure to all aspects of Radiation Oncology. Strong research background.

Other Key Features: N/A

Common Clinical Encounters: Breast cancer. Prostate cancer. Lung cancer. Gyne. GU.

Workload: This is mostly an outpatient-based residency training program. The inpatient load is small. The workloads mainly consist of consultations and follow-up clinics. Radiation Treatment planning is an integral part of the program. Residents are required to read throughout the program. The academic aspect of the program is strong. On call: 1:5–1:6 weeks.

Research Expectations: Residents are expected to do one research project per year. There is also a possibility of a six-month elective/research time at the discretion of the Program Director and depending on the interest of the trainee.

Areas to Improve Program: This is a very strong program. More consistent teaching in Radiology would be desirable. This particular aspect of the program is currently being addressed.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Radiation Oncology. Surgery. Internal Medicine.
- › **Other:** Excellent academic record. Research experience. Personal maturity and integrity.

University of Calgary

Strengths: Good mix of experienced staff/new recruits. Technologically one of the most advanced centres.

Other Key Features: One of the few academic centres with all oncology-related specialties. Recently received six-year full accreditation from Royal College of Physicians and Surgeons of Canada.

Common Clinical Encounters: GU Prostate. Lung. Breast. Colorectal (GI). Gyn.

Workload: N/A

Research Expectations: None in 1st year. More than six months of research available in PGY2/3, or can do longitudinal projects. Research is strongly recommended.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Radiation Oncology. Radiation Oncology. Radiation Oncology.
- › **Other:** Elective in Radiation Oncology. Enjoy seeing patients.

Université de Laval

Strengths: very strong teaching program with workshop/tutorials by radiation oncologist or other teacher every week day from 8h00 to 9h30. Workshop for senior residents on stress gestion and mental preparation for final exams. very good exposure to a variety of cancer cases. every week dosimetry workshop with senior dosimetrist and direct access to dosimetry station by residents for learning experimentation. Good and up to date

technological equipments.

Other Key Features: Good communication with staff and program director. very dynamic and involved program committee. good and up to date objectives of training. website specific for our program www.programme-radio-oncologie.ulaval.ca

Common Clinical Encounters: N/A

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	30	Variable	1 day/10 days from home beginning PGY2
<i>Second third of program</i>	30	Variable, usually more intense	1 day/10 days from home
<i>Final third of program</i>	30	variable. usually more intense for final exams preparation	1 day/10 days from home

Research Expectations: usually 6 months dedicated to a research project (elective but most residents will choose this elective). Most residents will present to a major international meeting (oral or poster) and most residents will publish at least one article by the end of residency.

Areas to Improve Program: Having more specific objectives for other canmeds areas than expert. Continue to develop specific teaching sessions for canmeds roles and ways to better assess and evaluate these roles in our program.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** N/A
- › **Other:** N/A

University of Ottawa

Strengths: Excellent teachers who are supportive of the residents. Excellent variety and high volume of adult Oncology cases. Only fully functional brachytherapy program in Ontario and largest in Canada. Also, we have a good research emphasis, and state-of-the-art technical facilities for Radiation Treatment.

Other Key Features: One of the training programs that has achieved a high success rate in the Royal College examination. Strong brachytherapy program.

Common Clinical Encounters: Lung. Breast. Prostate. Gastrointestinal malignancies. CNS malignancies.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	36	7	1 in 5
<i>Second third of program</i>	36	7	1 in 5
<i>Final third of program</i>	36	7	1 in 5

Research Expectations: Up to six months in 3rd year of residency.

Areas to Improve Program: Expand the scope of research available to residents. Strengthen teaching in critical appraisal, practice management, and team.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Radiation Oncology. Pathology. Surgery.
- › **Other:** Present yourself for interview. Good undergraduate background.

University of Toronto

Strengths: One of the leading Radiation Oncology departments in the world. A supportive, collegial, multiprofessional, and multidisciplinary environment, with a structured education program that is flexible and responsive to student needs. Remarkable wealth of resources available to the program (patients, technical resources, teachers, and research).

Other Key Features: After you complete our program you will be an outstanding clinician. You will have the skills to innovate and lead. You will make a difference. There are outstanding job opportunities.

Common Clinical Encounters: Curable localized cancer in patients who wish to preserve organ function through radiotherapy. Curable localized cancer that requires a combination of chemotherapy, surgery, and radiation. Incurable cancer spread to organs resulting in pain, bleeding, or other symptoms treatable with Radiation Therapy. Oncology emergencies such as spinal cord compression. “Salvage” radiotherapy for recurrent cancer after curative surgery.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	55	10	35
<i>Second third of program</i>	50	15	28
<i>Final third of program</i>	35-40	20-30	10

Research Expectations: None in 1st year. We want residents to do several projects that result in several publications. The RCPSC permits that six months be devoted to research. Many residents do longitudinal projects and do not request formal research time. We will facilitate a Master’s or doctorate if it is your wish.

Areas to Improve Program: Better integration of Imaging and Pathology into the curriculum. Improved national and provincewide systems for career planning.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Radiation Oncology. Medical Oncology. Surgical Oncology.
- › **Other:** Initiate and complete a scholarly project. Get references from a Radiation Oncologist outlining your suitability for the field. Excellent clinical skills, diagnostic ability, and patient communication.

University of Western Ontario

Strengths: Strong didactic and small group teaching in oncology, physics and treatment planning. Excellent clinical faculty committed to teaching. Good balance between clinical, research and teaching requirements during residency training. Awarded 2007 PAIRO Residency Program Excellence Award.

Other Key Features: Academic half-day and treatment planning rounds weekly. Practice oral and written exams years 2-5. Grand rounds and multidisciplinary team meetings weekly. Access to tomotherapy, IMRT, IGRT, rapidarc and respiratory gating.

Common Clinical Encounters: New patient clinical assessments. Post-treatment follow-up. On-treatment assessment. External beam and brachytherapy planning and treatment.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	35-40	5	5-6
<i>Second third of program</i>	35-40	5	5-6
<i>Final third of program</i>	35-40	10	5-6

Research Expectations: Research encouraged with non-mandatory expectation of one research project completed by the end of residency training.

Areas to Improve Program: Updating program to reflect CANMEDS roles.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Radiation oncology, medical oncology.

Programs Not Responding

University of Alberta

University of Manitoba

UROLOGY

Description of Specialty

Urology is a surgical specialty that deals with diseases of the male and female urinary tract and the male reproductive organs. Urology covers diagnosis and treatment of both adults and children. Although Urology is classified as a surgical specialty, the Urologist is required to have knowledge of Internal Medicine, Pediatrics, Gynecology, and other specialties because of the wide variety of clinical problems encountered.

Overview of Program

All programs in Urology are five years in duration and are designed to complete the requirements set out by the Royal College of Physicians and Surgeons of Canada. In general, the PGY1 and PGY2 years consist of core surgery training to prepare the individual for Part II of the Medical Council of Canada Qualifying Examination and the Principles of Surgical Examination. PGY3 to 5 offer exposure to Surgical and Clinical Urology by rotating through different urological services with increasing operative exposure and level of responsibility in preparation for the Royal College Examinations. At the conclusion of the final year, the trainee should be able to function independently as a urologic consultant.

Fellowships offered without Royal College status:

- › Andrology (Infertility and Erectile Dysfunction)
- › Endo-urology
- › Female Urology
- › Laparoscopic Surgery
- › Neuro-urology Urodynamics
- › Pediatric Urology
- › Reconstructive surgery
- › Renal Transplantation and Transplant Immunology
- › Urologic Oncology

2010 Quota – Total Positions 30

	Quota	IMG Quota
<i>Dalhousie University</i>	2	–
<i>McGill University</i>	2	–
<i>McMaster University</i>	3	–
<i>Memorial University</i>	–	–
<i>Queen's University</i>	1	–
<i>Université de Montréal</i>	2	–
<i>Université de Sherbrooke</i>	2	–
<i>Université Laval</i>	2	–
<i>University of Alberta</i>	1	–
<i>University of British Columbia</i>	3	–
<i>University of Calgary</i>	–	–
<i>University of Manitoba</i>	2	–
<i>University of Ottawa/Université d'Ottawa</i>	3	1
<i>University of Saskatchewan</i>	–	–
<i>University of Toronto</i>	4	1
<i>University of Western Ontario</i>	3	–

IMGs enter a competitive pool with domestic graduates in Manitoba and Quebec. IMGs participate in a parallel match in the remaining provinces for the first iteration of CaRMS.

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Dalhousie University

Strengths: Large clinical volume. Very structured academic program. All subspecialties. The people in our program.

Other Key Features: Opportunity for electives. Broad range of clinical experiences in several hospitals

Common Clinical Encounters: Prostate disease, Incontinence, Stones, Laparoscopy, Oncology, Pediatrics.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	30	10	1 in 4
<i>Second third of program</i>	30	10	1 in 4
<i>Final third of program</i>	20	10	1 in 4

Research Expectations: One project per year, or ongoing prospective project(s).

Areas to Improve Program: Enhance minimally invasive program. Hire more urologists.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Urology at Dalhousie or elsewhere in Canada.

› **Other:** Candidates wishing to be successful must maintain an adequate academic record. Choose clinical electives in Urology and demonstrate interest in this specialty by research, etc.

McGill University

Strengths: Large and varied operative experience. Committed teaching facility. Small program with good camaraderie among residents and faculty. Clinical Investigator Program for those interested.

Other Key Features: This is a superb training program that will prepare candidates to practise Urology anywhere and in whatever fields they wish to pursue.

Common Clinical Encounters: Prostate cancer. Other GU malignancies. Voiding difficulties in all age groups. Urinary tract infections in all age groups. Erectile dysfunction. Infertility.

Workload: First third of program is the core surgery year with a varied exposure to various medical and surgical disciplines relevant to Urology. Call ranges from no call to one and three in-house call depending upon the service. All rotations are hospital-based, with varied clinic exposure depending upon the service. After-hours reading is required throughout the program. The second third of the program is as a junior urology resident. The typical workweek is about 60 hours and is hospital-based. This workweek is a mixture of clinics, ambulatory care, war coverage, operative exposures, and an academic half day once per week. Call is one-in-three home call. Reading is an ongoing commitment during the day as well as after hours.

The last third of the training program is a senior or chief resident. Over time, the resident assumes more and more responsibility for the operative and postoperative care of patients. Exposure to ambulatory care and clinics continues but is less than in junior

years. The main focus is on operative exposure. Call is one and three throughout the final two years and is home call. Reading is after hours.

Research Expectations: None in 1st year. Each resident is responsible for one clinical research project per year thereafter. This is presented at a regional meeting. The project is completed during the academic half day, during the regular day as time permits, and after hours. The opportunity exists to obtain an M.Sc. or Ph.D. This would require taking a minimum of two years outside the five-year Urology program. This is usually done in between the second and third years or third and fourth years. It could be done as part of the Clinical Investigator Program.

Areas to Improve Program: Maintain the number of residents to two per year. Increase elective time.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Urology. Besides Urology, the resident is advised to obtain a broad and varied exposure to other disciplines during medical school. There are no specific electives required; however, the candidate is discouraged from spending all of his or her time in Urology.
- ▶ **Other:** Candidates are encouraged to obtain strong academic records, have elective experience in Urology with references attesting to an ability to fit in and get along with others, and have proven leader/participant experience in outside interests demonstrating that they have balanced lifestyles.

McMaster University

Strengths: Young, committed faculty determined to develop an excellent residency training program. Innovative teaching methods with an early emphasis on intra-operative experience. Opportunities to participate in clinical and basic science research.

Other Key Features: Largest laparoscopic program in Ontario, with early exposure for residents.

Common Clinical Encounters: Voiding dysfunction. Renal colic. Prostate cancer. Renal failure and transplantation. Kidney cancer.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	10	1 in 3
Second third of program	50	10	1 in 3
Final third of program	50	10	1 in 3

Research Expectations: None in 1st year. Residents will produce two projects of some type during their residency. These will take the form of either a case report, chart review, prospective or retrospective series, or basic sciences project. Funding will be provided for the projects and for any travel related to presentation of these papers.

Areas to Improve Program: Continued recruitment of new staff. Increased funding for research.

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** All students should endeavour to do a Urology elective at our site, or Urology electives at other centres, and Nephrology and transplant electives.
- ▶ **Other:** Candidates should have strong elective experience,

demonstrate knowledge of Urology in the personal letter, and participate in some form of research to demonstrate interest and commitment.

Queen's University

Strengths: Small, concentrated program. Staff dedicated to the education of residents. Staff are international experts in their field.

Other Key Features: Dedication to residents' education by all staff. Significant opportunity for a research career. Excellent working environment.

Common Clinical Encounters: Hematuria. PSA abnormalities. Stress incontinence. Renal stones. Renal masses.

Workload: Difficult to describe given the program's set-up.

Research Expectations: None in 1st year. Clinical research throughout residency.

Areas to Improve Program: More government support (money).

MEDICAL STUDENT TIPS

- ▶ **Useful Electives/Experience:** Urology. General Surgery. Transplant medicine.
- ▶ **Other:** Candidates are encouraged to complete the suggested electives. Contact the programs you are interested in. Contribute research in the field.

University of British Columbia

Strengths: High clinical volume and surgical exposure. Talented and enthusiastic group of residents who work closely together. Generous financial support from the program for educational materials and attendance at scientific meetings, courses and other educational events.

Other Key Features: It is not true that UBC "only takes its own." Very strong tradition of training talented surgeons. Tradition of accepting students from across the country. Training in the most beautiful city in Canada.

Common Clinical Encounters: Prostate cancer. BPH. Urolithiasis, urosepsis. Hematuria, congenital uropathies, renal transplantations. Paediatric urology. Renal transplantation.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	40	7	1:3 (home call)
Second third of program	40	14	1:3 (home call)
Final third of program	40	21	1:3 (home call); Chief resident takes "back-up" call 1:1 for 4 months; PGY5s have 3 to 4 blocks with no call prior to royal college exams in June

Research Expectations: There is no specific research rotation. Residents are expected to participate in research and present their work at the Department's annual research day and the Northwest urological meeting. Residents receive generous support to attend many scientific meetings around North America to present their work.

Areas to Improve Program: More staff, operating time, and resources.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Urology. Uroradiology. Nephrology/Transplant.
- › **Other:** While it is not a requirement, applicants wishing to be successful must have done an elective with us so we can become familiar with you. Meeting the residents and faculty during the elective is critical for applicants so that they can make an informed decision about our program.

University of Alberta

Strengths: Our program is relatively small with close interaction between faculty and residents. There is a large clinical volume with tremendous operative experience. Furthermore, we have a tremendous laparoscopic and robotic experience in our program. U of A is one of the few programs across the country that trains the residents in robotic surgery. We are also centers of excellence in reconstructive urology, endourology and transplant. We are generally well resourced when compared to many other centers. There is an opportunity to do research and complete a Masters or PhD as part of the residency program. This would require additional years besides the five years of clinical urology.

Common Clinical Encounters: Our urology program encompasses both adult and pediatric populations. It can be practiced as a general urology practice or as a subspecialty. Subspecialties include pediatric urology, reconstructive urology, transplantation, oncology, stone disease, laparoscopic and minimally invasive surgery, infertility, incontinence, female urology, erectile dysfunction, and research. Cases range from laparoscopic and open surgery to microsurgery cases. The Division of Urology at the U of A has fellowship trained surgeons in every subspecialty area of urology and thus experience is obtained in all areas. We have a very well rounded urologic experience.

Workload: Urology is a five-year training program. The first two years are Core Surgery years and are comprised of general surgery, urology, ICU, vascular surgery, pediatric surgery, and selectives (which can include cardiology, internal medicine, nephrology, diagnostic radiology, and emergency medicine). The remaining three years are all urology with experiences in all of the subspecialty areas within urology.

Research Expectations: Each resident is required to complete a clinical research project each year and present at a regional urological meeting (Prairie Urological Association Meeting). For those interested in pursuing a greater depth research training, there is the opportunity to complete a Masters or PhD in Experimental Surgery through the Department of Surgery Surgical Scientist Program or the Clinical Investigator Program.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** We look for a well-rounded individual with a genuine interest in urology that has exemplary interpersonal skills. This individual must be intelligent, and at the same time practical. We are also interested in students that are not afraid to get involved, participate in patient care and join in the health care team. An elective or selective in our urology program is highly recommended for any local applicant wishing to apply to the program. This is important not only for us to see the student but also for the student to be able to experience first hand what our program has to offer them. Nationally, in order to be competitive it is recommended that an applicant interested in urology complete a small research project. Any member of the Division of Urology would be more than happy to assist a student with a project.

› **Other:** N/A

Université de Montréal

Strengths: Excellent clinical exposure. Excellent surgical exposure. Well-structured education program. The program includes a four-week vacation period, seven work days per year available to study for major exams, seven days available for conferences. Expenses paid for conferences when presenting. Paid memberships to AUA and CUA included. Departmental resources include an up-to-date library, access to electronic Medline and Internet. Financial support for books. Registration to T-RES.

Common Clinical Encounters: Oncology, Infertility, Sexual dysfunction, Laparoscopic surgery, Endourology, Female urology.

Research Expectations: Basic research available in oncology (prostate and kidney cancer). Clinical research in epidemiology (oncology, quality of life issues).

University of British Columbia

Strengths: Clinical volume. Surgical exposure. High quality of residents.

Other Key Features: It is not true that UBC "only takes its own." Very strong tradition of training talented surgeons.

Common Clinical Encounters: Prostate cancer. BPH. Urolithiasis, urosepsis. Hematuria, congenital uropathies, renal transplantations.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	50	7	24
Second third of program	60	12	24
Final third of program	80	20	24

Research Expectations: Clinical projects are expected throughout training, but there is no specific research rotation dedicated to do so.

Areas to Improve Program: More staff, operating time, and resources.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Urology. Uroradiology. Nephrology/Transplant.
- › **Other:** Candidates wishing to be successful must have been exposed to other programs via electives, have had involvement in a urological research project as a student, and have done an elective with us so we can become familiar with you.

University of Manitoba

Strengths: Small (approximately 10 residents) and close interpersonal relationship with attendings. State-of-the-art endoscopy suite.

Other Key Features: Community rotation. Pediatric urology.

Common Clinical Encounters: Oncology, Pediatrics, infertility, laparoscopy, erectile dysfunction, female urology.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	45	10	1 in 4
Second third of program	45	10	> 1 in 4
Final third of program	35	15-20	> 1 in 4

Research Expectations: Present annually at local residents research day. Aim is to present research at national, international meeting 2-3 times. Publication encouraged if project worthy.

Areas to Improve Program: Increase research opportunities.

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** At least six weeks exposure to urology to ensure understand the specialty. Demonstrate surgical ability. Team player.
- › **Other:** Visit site of interest before CaRMS interviews.

University of Ottawa

Strengths: Excellent clinical exposure. Almost one-to-one staff-to-resident ratio. Superb collegiality among residents and staff.

Other Key Features: Superb clinical training program with access to all necessary urologic resources. Great collegiality between residents and staff, with ++ social interaction. Surgical training second to none in the country. Pass rate at Royal College exams 100% for the past 15 years.

Common Clinical Encounters: Prostate cancer. Stones. BPH. Incontinence. Pediatric urology.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
First third of program	Heavy	Moderate	Variable
Second third of program	Heavy	Heavy	Average
Final third of program	Moderate	Heavy	Average

Research Expectations: None in 1st year. One project per year thereafter. At least two national/international presentations during the residency.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

- › **Useful Electives/Experience:** Three Urology electives.
- › **Other:** Candidates wishing to be successful are encouraged to do Urology electives during clerkship, and to be communicative, collegial, and easygoing.

Université de Sherbrooke

Strengths: early exposure to minor and major OR cases friendly staff and ease to work with OR everyday chief resident as PGY3 Pathology, radiology rounds.

Other Key Features: Combined program with McGill or Montreal University for PGY4-5. Female urology aspect with Dre Le Mai Tu.

Common Clinical Encounters: Vgeneral urology, cancer, stone, incontinence and prolapse, laparoscopy.

Workload:

Clinic (hrs/wk) no resident clinic but the resident needs to attend the staff clinic (1-2 clinic/day) Reading (hrs/wk) 15h (personal), Wednesday teaching 3 hours, pathologic grand round Call 7-9 calls/rotation according to the number of resident in the rotation.

First third of program: core curriculum of surgery. in the first year, 4 urology rotations, also vascular, general surgery and plastics.

Second third of program: in pgy2, the resident has 7 rotations in urology (including 3 rotations allocated for research)

Final third of program: pgy3: senior resident in Sherbrooke (operating everyday) As pgy4-5, the resident transfer to McGill university acting as a chief resident.

University of Western Ontario

Research Expectations: 3 months, doing mainly clinical or fundamental science research with opportunities to present in national and international congress.

Areas to Improve Program: Increase the exposure in the fields of infertility, erectile dysfunction and pediatric urology (limited staff as academic professor (4)).

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** implication in research is well perceived. also, the student must have performed a rotation in urology.

› **Other:** N/A

University of Toronto

Strengths: Wide clinical exposure. Nationally and internationally known faculty. Expertise in all specialty aspects of Urology.

Other Key Features: N/A

Common Clinical Encounters: Oncology, female and male voiding dysfunction. Urolithiasis. Sexual dysfunction. Infection (upper and lower urinary tract).

Workload: Daily surgical/ward exposure. Academic half day. Multiple courses. Surgical skills lab. Visiting professors. Special rounds. Hospital and university rounds. Call as per PAIRO.

Research Expectations: One clinical research project per junior and senior levels. Ability to go into surgical scientist program to achieve Master's or Ph.D. level degree.

Areas to Improve Program: N/A

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Should do two to three electives in Urology in Toronto.

› **Other:** Candidates are encouraged to attain good grades in medical school, have gained exposure to Urology with elective/core rotation experience, and demonstrate their desire/ability to become a surgeon.

Strengths: High-volume clinical exposure. Medium-sized program that promotes collegial learning atmosphere. Wide variety of research opportunities.

Other Key Features: Our residency program trains well-rounded Urologists. In the past few years our graduates have entered community as well as academic practices in equal proportion.

Common Clinical Encounters: Stone disease. Oncology: prostate and bladder cancer. Voiding dysfunction. BPH and incontinence. Erectile dysfunction. Transplantation.

Workload	Clinic (hrs/wk)	Reading (hrs/wk)	Call
<i>First third of program</i>	60	15	1 in 7
<i>Second third of program</i>	60	15	1 in 7
<i>Final third of program</i>	60	25	1 in 7

Research Expectations: In the PGY1 and 2 years a research project is optional. In the PGY3–5 years a minimum of one project per year is required. These projects can be basic science-related or clinical. Most residents submit their work for presentation at a national or international meeting.

Areas to Improve Program: Greater exposure to complex pediatric urologic problems. Greater clinical exposure to Neuro-urology.

MEDICAL STUDENT TIPS

› **Useful Electives/Experience:** Urology electives at as many different sites as possible. GU Radiology. Nephrology/Transplantation.

› **Other:** Candidates are encouraged to complete as many Urology electives at as many different programs as possible. Try and get involved in a research project if time allows; even the preparation of a case report is useful. Have strong reference letters; these are essential. Try to work closely with three Urologists who can write detailed letters of support.

Programs Not Responding

Université de Laval

Section D

CAREER PROFILES

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This chapter is a summary of a survey that was also sent to a sample of established physicians across Canada. The majority of the questions focused on lifestyle issues pertaining to their respective careers. This chapter also includes average salaries for physicians by specialty and province.

A word about study methods

In this particular section, we attempted to contact physicians across the country practising in a variety of clinical settings with varied years of experience.

Members of the MSC committee generated items that were considered of interest to candidates applying to a residency program. These included financial compensation, job satisfaction, and workload. These career profile surveys were emailed to physicians, and their responses to the questions are shown below in unaltered form.

Anesthesia**About you**

Occupation	Anesthesiologist	Anesthesiologist	Anesthesiologist	Anesthesiologist/ Critical Care	Anesthesiologist	Anesthesiologist
Years in current practice	35	36	29	15	20	12
Type of practice	University-clinical and academic	Urban, 5 days/week, primarily university-based	Urban	Teach >20; urban	Teach <20; urban	Teach >20; urban
Division of time/time in research	90% clinical	90% clinical, 10% teaching	95% clinical, 5% research	25–50%	1–25%	1–25%
Family status	Married, two children, no grandchildren	Married, children	Married, three children	Married, children	Married, children	Married, children

About the job

Occupation	Anesthesiologist	Anesthesiologist	Anesthesiologist	Anesthesiologist/ Critical Care	Anesthesiologist	Anesthesiologist
Average hours per week	60	80	80	71–100	51–70	51–70
Three most common complaints	1) Relatively poorly paid 2) On-call means necessarily in hospital usually 3) Some hospital staff have low opinion of Anesthesia as a specialty	1) Lack of recognition by the general public 2) Lack of consideration from surgical colleagues and nurses (e.g., Anesthesiologists are viewed as part of the furniture) 3) Do not get paid as much as deserved	1) Lack of remuneration 2) Lack of resources 3) Lack of control over your practice	1) Inefficiency 2) Resources 3) Communication	1) Not enough time 2) Recognition for work done 3) More space	1) Stress 2) Paperwork 3) Poor administration support
Adequately paid?	Not really	No	No	Yes	Yes	No
What do you like the most about the career?	Interesting work (every case a physiological experiment). University connection means contact with young, uncluttered minds—ability to learn while teaching; no need to “suck up” to referring physicians—very portable career (has allowed me to work in Northern Ontario, USA, Africa, Middle East)	You don't have to get to know patients well and develop emotional attachments	Helping people, no office, no follow-up	Patients	Helping patients, interacting with colleagues and staff	Intellectual challenge, interesting procedures to perform, challenging mix of Pathophysiology/ Pharmacology. Making a difference in people's lives

Occupation	Anesthesiologist	Anesthesiologist	Anesthesiologist	Anesthesiologist/ Critical Care	Anesthesiologist	Anesthesiologist
What do you want to improve?	“People” skills and administrative skills	Increase the income	Increase the hourly rate to attract more Anesthesiologists; have more control over OR time—not the administration; provision of a different health care system	Inefficiency	Have more Anesthesiologists available to do the work	More flexibility with hours, improved support by hospital administration (e.g., equipment, personnel for OR, Recovery Room, and Chronic Pain Clinic)
Would you choose Anesthesiology if you were to start a career in medicine all over again?	Yes	N/A	N/A	N/A	N/A	N/A

About your life

Occupation	Anesthesiologist	Anesthesiologist	Anesthesiologist	Anesthesiologist/ Critical Care	Anesthesiologist	Anesthesiologist
What do you enjoy doing in your spare time?	Read, jog, swim	Jog, read, attend concerts	Travel, exercise, tennis, nice dinners	Read, music, movies	Hike, bicycle, ATV offroad, photography, video, mapping, plotting new trails, computer, movies	Family activities, ballroom dancing, house/yard work
Does family life ever suffer as a result of the career?	Rarely	Occasionally	Often	Often	Sometimes	Often
Job satisfaction (1–10)	9	8	6	8	8	6
One-sentence summary	N/A	This specialty is good if you do not depend on close relationships with patients. There is the opportunity to work part-time (e.g., for mothers who want to be at home some days).	This is a specialty suited to a person who loves Anesthesiology—the need for a rapid response, no time to think. You need to be on your toes all the time.	Stress is a frequent part of the job and should be recognized as such by anyone entering the specialty.	Great specialty with lots of job opportunities and personal satisfaction	The work is exciting and interesting. I love what I do. With proper support and better chronic pain (not Anesthesiology) remuneration, it would be terrific!

Cardiac Surgery

About you

Occupation	Cardiac Surgery
Years in current practice	7
Type of practice	Cardiac Surgery
Time in research	It all blends into one blur!
Family status	Married, with 3 children

About the job

Occupation	Cardiac Surgery
Average hours per week	100
Three most common symptoms reported by your patients	Chest pain, anxiety, dyspnea
Adequately paid?	No
Like the most?	Immediate gratification
Want to improve?	Increased resources

About your life

Occupation	Cardiac Surgery
In your spare time?	Golf
Does family life ever suffer?	Yes
Job satisfaction (1–10)	9
One-sentence summary	Very demanding and time consuming job...but this is the life I've chosen.

Community Medicine

About you

	Academic Community Medicine Physician – Assistant Professor	Scientist (Researcher) and Family Practice (20%)	Community Medicine Specialist
Occupation			
Years in current practice	Six years at U of T, 15 years of public health practice	Research: three years; clinical practice: 13 years	Two in current position; 20 in the field
Type of practice	Teaches >20 days per year, urban practice	Research-urban, clinical-rural	Urban; teaches <20 days per year
Time in research	1–25%	1	1–25%
Family status	Married, children	Single, no children	Married, children

About the job

	Academic Community Medicine Physician – Assistant Professor	Scientist (Researcher) and Family Practice (20%)	Community Medicine Specialist
Occupation			
Average hours per week	51–70	35–50	51–70
Three most common complaints	1) Challenges in education 2) Infectious disease outbreaks 3) Public health surveillance, environmental exposure, and health promotion	1) Research? N/A	—
Three most common symptoms reported by your patients	—	—	1) Communicable disease prevention and control 2) Chronic disease prevention
Adequately paid?	Yes	Yes	Yes
Like the most?	The students, the challenge of teaching, the focus on community health and long-term impact on health	N/A	Interesting, challenging, makes a difference in the population
Want to improve?	Have more time to work on evaluating effectiveness of education, having more time to work on applied public health issues such as surveillance. Right now, I am a consultant and have to limit my involvement due to the hours required to teach. Hence, I can only be involved at a more superficial level.	N/A	Stable sufficient funding for public health, sufficient backup

About your life

	Academic Community Medicine Physician – Assistant Professor	Scientist (Researcher) and Family Practice (20%)	Community Medicine Specialist
Occupation			
In your spare time?	Run, garden, brew beer	Quite active, varied, interested	Read, bike, garden
Does family life ever suffer?	Rarely (it was more difficult when I worked in public health but academic hours are more flexible and I can work from home more easily)	Rarely	Sometimes
Job satisfaction (1–10)	9 I get a bit tired every so often from marking and reading papers. However, overall I would not change it at all.	9.5	6
One-sentence summary	Community Medicine offers a tremendous variety of career options that span academics, to research to applied public health. There are always challenges and one is never bored. You do need to be a self-starter in that one has to look for problems and be proactive. One also has to accept a very limited clinical practice. However, the rewards are worth it (from my perspective).	Community Medicine is a varied specialty with an inexhaustible number of options from international development to population-focus clinical practice. It is impossible not to find satisfying, important work. The specialty is particularly well-suited to those who are interested in improving the health of entire populations as opposed to a strictly individual clinic approach.	Community Medicine is a field of medicine in which the health of the community or population is assessed and managed. Community Medicine practitioners use strategies of health promotion, health protection, and disease prevention in improving the health of the public.

Dermatology

About you

Occupation	Dermatology Resident	Dermatologist
Years in current practice	2	15
Type of practice	Resident	Academic/private
Division of time	Work & studying 75%, Social, other 25%	50/50
Family status	Single	Married

About the job

Occupation	Dermatology Resident	Dermatologist
Average hours per week	60	50
Three most common complaints	Skin cancer, psoriasis, skin manifestations	Pre-cancerous skin lesions, dermatitis, mole check
Adequately paid?	Not really	Yes
Like the most?	Treating the patients	Variety
Want to improve?	I don't really have any complaints, other than the misperception that Dermatologists are "pimple popper MDs"	Less number of patients seen

About your life

Occupation	Dermatology Resident	Dermatologist
In your spare time?	Church activities, singing, exercising	Spending time with my family
Does family life ever suffer?	Sometimes	Somewhat
Job satisfaction (1–10)	10 once I'm staff, but right now 9	8
One-sentence summary	Dermatology is a phenomenal career choice, where you can see a variety of conditions affecting every ethnicity and all age groups. The opportunities in medical dermatology, surgery, pathology, and research are numerous. I couldn't see myself in any other career.	Interesting variety, helping people, problem solving and relative independence are terms that describe Dermatology.

Diagnostic Radiology

About you

Occupation	Diagnostic Radiologist
Years in current practice	23
Type of practice	No research, suburban
Time in research	None
Family status	Married, children

About the job

Occupation	Diagnostic Radiologist
Average hours per week	35
Three most common symptoms reported by your patients	1) Pain NYD 2) Wt loss 3) Cough
Adequately paid?	Yes
Like the most?	Pure diagnostics
Want to improve?	Nothing

About your life

Occupation	Diagnostic Radiologist
In your spare time?	Read, ski, garden
Does family life ever suffer?	Rarely
Job satisfaction (1–10)	9
One-sentence summary	Great general multi-disciplinary overview of medicine

Emergency Medicine

About you

	ER Staff	GP on ER roster	Chief ER Staff
Occupation	ER Staff	GP on ER roster	Chief ER Staff
Years in current practice	4	30	20
Type of practice	Urban, teaches >20 days per year		Suburban, teaches >20 days per year
Time in research	None	None	None/hates research
Family status	Married, two children	Married	Married, three boys

About the job

	ER Staff	GP on ER roster	Chief ER Staff
Occupation	ER Staff	GP on ER roster	Chief ER Staff
Average hours per week	35–50	35–50	35–50
Three most common complaints	1) Shift work 2) Hectic	1) Back pain	1) Standard of care is dwindling 2) Perceived lack of compassion by patients 3) Not paid enough for saving a life in 15 minutes
Adequately paid?	Yes	Yes	No
Like the most?	Variety of patients, e.g., geriatric/pediatric, male/female	Patient contact	Nothing is ever the same/variety
Want to improve?	Decrease volume, more staff	More RNs	Decrease patient volume, i.e., need more time for patient care

About your life

	ER Staff	GP on ER roster	Chief ER Staff
Occupation	ER Staff	GP on ER roster	Chief ER Staff
In your spare time?	Family stuff	Everything	Family, tennis, jogging, skiing
Does family life ever suffer?	Rarely	Rarely	Between sometimes and often
Job satisfaction (0–10)	8	10	8
One-sentence summary	If you don't mind shift work, this is the best you could ask for.	Go for it.	A great career that is not advertised enough; you need to spend time with someone like myself to learn about it.

Family Medicine

About you

	GP	Family Medicine
Occupation	GP	Family Medicine
Years in current practice	18	22
Type of practice	Urban, 100% independent	Family Health Team
Division of time	90% clinical, 10% research	70/30
Family status	Married, two children	Married, two children

About the job

	GP	Family Medicine
Occupation	GP	Family Medicine
Average hours per week	55	50
Three most common complaints	Doctor complaints: 1) Too much paperwork 2) Too many patients/clinical volume 3) Staff problems	Patient complaints: Depression/anxiety, intercurrent illness of childhood, chronic disease management, diabetes, hypertension
Adequately paid?	No	Yes
Like the most?	Interaction with patients	Relationships
Want to improve?	Work less, make more	Working less

About your life

	GP	Family Medicine
Occupation	GP	Family Medicine
In your spare time?	Travel	Golf, flying, cottage life
Does family life ever suffer?	Always	At times, late nights, call
Job satisfaction (1–10)	8	9
One-sentence summary	This is a specialty for people who are willing to put in a lot of hours.	The work gives you the opportunity to share in people's lives, their triumphs and tragedies, sometimes to help

General Surgery

About you

Occupation	General Surgeon/Administrator	General Surgeon/Trauma Surgeon/ Critical Care Medicine/Scientist
Years in current practice	27	2
Type of practice	HOB Oncology; teach >20 days per year; urban	Teach <20 days per year; urban
Division of time	1-25%	25-50%
Family status	Married, children	Married, children

About the job

Occupation	General Surgeon/Administrator	General Surgeon/Trauma Surgeon/ Critical Care Medicine/Scientist
Average hours per week	51-70	71-100
Three most common complaints	—	1) Too busy 2) Too much work done off regular hours 3) Too much pressure to always work more
Adequately paid?	Yes	Yes
Like the most?	Clinical; changing; interesting; results-oriented; administration; chance to be a part of decision-making	You can (really) make a difference between life and death
Want to improve?	More resources for health care based on REAL costs	Need more time off work

About your life

Occupation	General Surgeon/Administrator	General Surgeon/Trauma Surgeon/ Critical Care Medicine/Scientist
In your spare time?	Family, sports, music, theatre, dinners with friends	Stay with family, play/watch soccer
Does family life ever suffer?	Sometimes	Sometimes
Job satisfaction (1-10)	7	8
One-sentence summary	General Surgery has a breadth and depth that is unparalleled in surgical practice.	Lots of work, lots of fun.

Internal Medicine

About you

Occupation	Internist (Infectious Disease)
Years in current practice	30
Type of practice	Independent
Division of time	Minimal
Family status	—

About the job

Occupation	Internist (Infectious Disease)
Average hours per week	50
Three most common complaints	1) Bureaucracy 2) Weekend call 3) —
Adequately paid?	Fine
Like the most?	Case variety
Want to improve?	Bureaucratic infrastructure

About your life

Occupation	Internist (Infectious Disease)
In your spare time?	—
Does family life ever suffer?	Occasionally
Job satisfaction (1-10)	—
One-sentence summary	—

Internal Medicine Cardiology

About you

Occupation	Cardiologist	Cardiologist
Years in current practice	23	3
Type of practice	General and invasive cardiology. Community Cardiology	Academic
Division of time	90% patient care 5% administration 5% research	80% clinical/teaching; 20% research/admin
Family status	Married, with 6 children	Married

About the job

Occupation	Cardiologist	Cardiologist
Average hours per week	40–60	50
Three most common complaints	Acute coronary syndromes presenting to the ER or transferred from other hospitals. Follow up of chronic stable CAD in office setting. Assessment of chest pain both in office and hospital.	Chest pain, shortness of breath, palpitations (coronary disease, heart failure, arrhythmias)
Adequately paid?	Yes	Yes
Like the most?	Being the decision maker in the management of patients. Being “my own boss”	Interesting clinical problems are presented. There is an opportunity for acute (CCU) and chronic patient care. New technology is frequently being introduced (transcatheter therapies, ventricular assist devices, AICDs/ pacemakers) and there are numerous advances in cardiac imaging that improve understanding of the CV system.
Want to improve?	Recruit more cardiologists to spread out the workload.	Nothing specifically related to cardiology. Interpersonal conflict and politics are always present in an academic, tertiary care hospital.

About your life

Occupation	Internist (Infectious Disease)	Cardiologist
In your spare time?	Spending time with my family. Golfing.	Ski, hike, garden, music, play piano
Does family life ever suffer?	Yes	Hard to say. The hours are clearly longer than many jobs, but with organization, support and some compromises, it's manageable.
Job satisfaction (1–10)	8	9
One-sentence summary	Great choice of career. Will definitely encourage some of my children to become physicians.	Cardiology is a great career if you like a more more intensive specialty with potential for procedures and imaging.

Sunny from Case 6 is interested in a career in Cardiology, limited to a 50-hour work week. The lifestyle profiles highlighted here indicate that such a career is possible for Sunny. In general, most new physicians should be able to find a niche within a specialty to accommodate the hours they'd like to work.

Internal Medicine Endocrinology

About you

Occupation	Endocrinologist	Endocrinologist
Years in current practice	9	1
Type of practice	Academic	Community Clinical
Division of time	75 % teaching, 10 % research 10% administrative, 5% other	100% Clinical
Family status	Single	Single

About the job

Occupation	Endocrinologist	Endocrinologist
Average hours per week	50-60	60
Three most common complaints	Diabetes, Thyroid, Osteoporosis	Diabetes, thyroid, amenorrhea
Adequately paid?	Yes	Yes
Like the most?	Variety of cases, interesting problems	Patient interaction
Want to improve?	The amount of paperwork.	Paperwork

About your life

Occupation	Endocrinologist	Endocrinologist
In your spare time?	Theatre, concerts, travel, photography	Yoga, going to the theatre
Does family life ever suffer?	No	Yes
Job satisfaction (1–10)	8	8
One-sentence summary	I am glad a chose Endocrinology.	For the part you are in control of your schedule and time, but how much you put into it determines your degree of satisfaction and the that of the patients.

Internal Medicine Gastroenterology

About you

Occupation	Gastroenterology	Hepatologist
Years in current practice	21	9
Type of practice	Urban, university teaching hospital, and private clinical practice	Academic, university hospital
Division of time	75% clinical with clinical teaching, 25% admin and classroom teaching	50% clinical, 15% research, 10% admin, 25% teaching
Family status	Married, two daughters	Single

About the job

Occupation	Gastroenterology	Hepatologist
Average hours per week	60	50–60
Three most common complaints	Doctor complaints: 1. Lack of clinical resources 2. Paperwork 3. Clinical volume	Patient complaints: Hepatitis C, abnormal liver tests, non alcoholic fatty liver disease
Adequately paid?	Yes	
Like the most?	Clinical practice	Variety between clinical, teaching, admin, and research
Want to improve?	—	Nothing

About your life

Occupation	Gastroenterology	Hepatologist
In your spare time?	Sports, travel, family activities	Shopping, traveling, sleeping
Does family life ever suffer?	Occasionally	Partly
Job satisfaction (1–10)	7	8.5
One-sentence summary	Great clinical specialty for those willing and interested in working hard.	Fulfilling

Internal Medicine General Internal Medicine

About you

Occupation	General Internal Medicine/Infectious Disease	General Internal Medicine
Years in current practice	32	6
Type of practice	Academic Health Science Center “hospitalist”	Academic
Division of time	Teaching/education 50%; clinical 45%; administration 5%	50% teaching, 50% clinical
Family status	Divorced, with 2 adult children	Married

About the job

Occupation	General Internal Medicine/Infectious Disease	General Internal Medicine
Average hours per week	56	60
Three most common complaints	GIM: pneumonia, dementia, complications of cancer, stroke. ID: nosocomial infection, fever, bacteremia, cellulitis, HIV	Pneumonia, CHF, Stroke
Adequately paid?	Yes	So-so
Like the most?	Acute care of severely ill patients	Variety, contact with students
Want to improve?	Ability to deal with “high maintenance” patients and families	Remuneration, support from hospital

About your life

Occupation	General Internal Medicine/Infectious Disease	General Internal Medicine
In your spare time?	Hiking, reading, travel, restaurant meals, playing with my granddaughter, watching Leafs’ hockey	Bicycling, time with family
Does family life ever suffer?	No	Not much
Job satisfaction (1–10)	10	8
One-sentence summary	What a privilege it is to be in this profession!	Great life, nice job

Internal Medicine Hematology

About you

Occupation	Hematologist	Pediatric Hematologist
Years in current practice	20	3
Type of practice	Clinical Hematology	Academic
Division of time	50% clinical, 20% administration, 15% research, 15% teaching,	80% clinical, 15% research, 5% administrative
Family status	Separated, with 2 children	Single

About the job

Occupation	Hematologist	Pediatric Hematologist
Average hours per week	50	50–80
Three most common complaints	Doctor complaints: Not enough time to devote to the academics, shortage of hematologists to share the load, expensive drugs which are hard for patients to access	Patient complaints: Deep vein thrombosis, arterial thrombosis, stroke
Adequately paid?	Yes	No
Like the most?	The patients	Research Opportunities
Want to improve?	Want to recruit more hematologists to share the load	Implementation of ideas

About your life

Occupation	Hematologist	Pediatric Hematologist
In your spare time?	Reading, arts, family	Sports
Does family life ever suffer?	Yes	Yes
Job satisfaction (1–10)	8	6
One-sentence summary	Love clinical hematology, wonderful mix of patients, exciting new therapies.	Time consuming

Internal Medicine Infectious Disease

About you

Occupation	Infectious Diseases/Internist	Tropical Disease Medicine	Infectious Disease Specialist
Years in current practice	8	30	5
Type of practice	Academic	Academic hospital based	Clinician Scientist
Division of time	33% clinical, 33% teaching/education, 33% admin	70% clinical, 20% teaching, 10% e-mail	80% research, 20% clinical
Family status	Married, with 3 children	Divorced, with 5 grown children	Married, with 2 kids

About the job

Occupation	Infectious Diseases/Internist	Tropical Disease Medicine	Infectious Disease Specialist
Average hours per week	50	70	55
Three most common complaints	Fever, abnormal test result (e.g., high WBC count), shortness of breath	Travelers' diarrhea, skin problems, fever in the returned traveler	HIV, STDs, pneumonia
Adequately paid?	Yes	Yes; not a great pension	Could be better
Like the most?	Variety	The patients, the clinical challenges; teaching, the variety of tasks; opportunity to travel and work in the developing world.	Doing self-directed research
Want to improve?	The efficiency of the system, so that I spend less time gathering info, and more time helping patients	More appreciation for the hours spent and recognition for excellence in teaching	Research doesn't pay as much as clinical work.

About your life

Occupation	Infectious Diseases/Internist	Tropical Disease Medicine	Infectious Disease Specialist
In your spare time?	Family time, exercise, reading, tech-related stuff	Movies, rollerblading, skiing.	Travel, kids, sports
Does family life ever suffer?	Minimally	Yes, definitely. An academic life has many challenges and expectations; finding balance early in one's career in spite of academic pressures is the most important determinants for a successful family life.	No
Job satisfaction (1–10) One-sentence summary	9 I spend most of my days being a detective and teaching others to be a detective.	9 An amazing, wonderful, satisfying, rewarding, exciting career that I would re-do (with a little more balance) in a heart beat	9 Love being a clinician scientist, but income tends to suffer.

Internal Medicine Nephrology

About you

Occupation	Nephrologist	Nephrologist
Years in current practice	12	15
Type of practice	Academic mix of Transplantation and General Nephrology	Full-time academic
Division of time	40% Transplantation 20% General Nephrology 40% research	90% between clinical, research and teaching 10% administration
Family status	Married, with kids	Married, with children

About the job

Occupation	Nephrologist	Nephrologist
Average hours per week	60	80
Three most common complaints	Decreased Kidney function, protein or blood in urine, electrolyte imbalance	Uncontrolled hypertension or progressive kidney disease or both
Adequately paid?	Yes	Yes
Like the most?	Long-term relationships with patients; challenging diseases spanning electrolytes, endocrinology, immunology; treatment approaches generally available	Ability to make a difference, multifaceted practice including peer-reviewed research and teaching
Want to improve?	Availability of nursing support — nurse clinicians/nurse practitioners	Mostly care models and better governance at the hospital and university level

About your life

Occupation	Nephrologist	Nephrologist
In your spare time?	Skiing, travel, sailing, attending kids, activities	Family time, sports and more family time.
Does family life ever suffer?	Inevitably yes, but with careful juggling and will to exploit opportunities, e.g., bring family on conferences, works fine	A little
Job satisfaction (1–10)	9	10
One-sentence summary	Overall, a mix is critical to avoid having work life become stale.	I have been fortunate to work in one of the best job descriptions together with my colleagues.

Internal Medicine Respiriology

About you

Occupation	Respirologist	Pediatric Respirologist
Years in current practice	30	32
Type of practice	Teaching-based hospital	Pediatric respiratory medicine
Division of time	Clinical and teaching, with some research	70% admin, 20% research, 20% education
Family status	Married grandfather	Re-married, with two children

About the job

Occupation	Respirologist	Pediatric Respirologist
Average hours per week	80	60 (not counting call)
Three most common complaints	SOB, cough, abnormal chest X-Ray	—
Adequately paid?	Yes	Yes
Like the most?	Patients and students	Developing young clinician-scientists and teaching respiratory medicine fellow
Want to improve?	Quality of hospital care	Increase funding for research of young faculty

About your life

Occupation	Respirologist	Pediatric Respirologist
In your spare time?	Family, music	Running
Does family life ever suffer?	No	#1 priority is family; #2 priority is career; #3 priority is social (i.e., have to be happy at work to be happy at home and you have to be happy at home to be happy at work)
Job satisfaction (1–10)	9	9
One-sentence summary	Rewarding	Work hard, be dedicated, be honest with yourself as to what you want to do (i.e., When you wake up at night do you want to do it?) and find three role models (in academics or private practice) who you would like to “grow up to be like” and learn from them and their advice (throw some of it out and keep some of it).

Internal Medicine Rheumatology

About you

Occupation	Rheumatologist
Years in current practice	25
Type of practice	Teaching-based hospital
Division of time	50% clinical, 10% admin, 20% research
Family status	Divorced

About the job

Occupation	Rheumatologist
Average hours per week	70
Three most common complaints	RA, PSA, AS
Adequately paid?	No
Like the most?	Creative aspects of teaching
Want to improve?	Do more of what I enjoy — research and teaching

About your life

Occupation	Rheumatologist
In your spare time?	Reading, travel, theatre
Does family life ever suffer?	Yes
Job satisfaction (1–10)	5
One-sentence summary	Totally consuming career and very poor lifestyle

Internal Medicine Occupational Medicine

About you

	Occupational Health Physician	Medical Consultant	Professor/Clinical	Resident, U of T
Occupation				
Years in current practice	18	19	14	0
Type of practice	Independent	Research, teaching, consultant	Teaching, clinic, consulting	—
Division of time	100% clinical	50–75%	1–25%	1–25%
Family status	Married, two children	Married, children	Married, three children	Married

About the job

	Occupational Health Physician	Medical Consultant	Professor/Clinical	Resident, U of T
Occupation				
Average hours per week	50	51–70	51–70	35–50
Three most common complaints	Doctor complaints: 1) Very political 2) Involves medicolegal risk 3) No job security	Doctor complaints: 1) Renumeration may be lower than private practice	Patient complaints: 1) Inhalational exposures 2) MSK rehab & return to work planning 3) Toxicology	—
Adequately paid?	Remuneration generally reasonable	Yes and no	Yes	Yes
Like the most?	Interaction with non-medical personnel	Interesting; research; prevention; linking of clinical and epidemiology	Diversity, scope; need help with the teaching load; more persons working in occupational health	Highly flexible to career interests; a better centralized organization
Want to improve?	Raise the stature of the profession	—	—	—

About your life

	Occupational Health Physician	Medical Consultant	Professor/Clinical	Resident, U of T
Occupation				
In your spare time?	Coach sports teams	Jog, tennis, biking, travel	Family, reading, walking dog, photography	Travelling
Does family life ever suffer?	Rarely	Rarely	Sometimes	Never
Job satisfaction (1–10)	8	8	8	8
One-sentence summary	A career for those who enjoy business.	—	—	—

Internal Medicine Occupational Medicine

About you

Occupation	Occupational & Environmental Medicine Specialist	Occupational Medicine Specialist	Occupational Medicine Specialist and Consultant, Flight Surgeon, Civil Aviation Medical Examiner, Assistant Professor	Occupational physician, Director of an Occupational and Environmental Health Clinic, Public Health Department
Years in Current Practice	2	9	7	20
Type of Practice	Hospital Based Occ Med Clinics 30%, Third Party (IMEs, Surveillance) 20%, Academic 10% Consulting for Industry 40%	Private sector consulting	Mixed academic (teaching, research) and consulting	Clinical practice in an University Health Center, Teaching in occupational Health, Medical advisor in Public Health
Division of Time/Time in research	10%	No research at present (option exists, though)	Variable from week to week, and month to month with frequent travel	Time in research 1/10
Family Status	Married, two children	Single	Married, 2 children	Married

About the job

Average hours per week	40	30-40	40-60	45 h/week
Three most common clinical complaints	1. Solvent and heavy metal exposure/toxicity 2. Causation analysis 3. RTW issues/ accommodation	1. MSK (pain, instability) 2. PSYCH (mood disorders, psychotic disorders, anxiety disorders) 3. Other (ENDO, CARDIORESP, DERM, especially) NOTE: These complaints occur in the context of determining a person's fitness to work, the key questions of which are: 1. Can the person work? 2. If the person can work, are functional restrictions necessary (ie. limit lifting) in the workplace.	Alcohol and drug, psychiatric, musculoskeletal	Toxicological related health problems, Mental health, MSK
Adequately Paid	Yes	Yes, very much so.	Varies with employer, I accept some lower paying contracts if they are interesting, unique, or enjoyable	Not really
What do you like the most about the career	Diversity of work, patient population (interesting, diverse and generally healthy)	1. Lifestyle 2. Career flexibility (hours, employment options) 3. Remuneration	Can't name just one thing... Representing Canada internationally particularly in my role with the Canadian Space Agency; contributing to large multi-centre projects which impact both space and terrestrial medicine; teaching and mentoring students both in Canada and abroad; driving new innovative approaches to policy and translating evidence from one field to another	Very challenging career No routine Combine clinical practice and teaching
What do you want to improve?	Increase protected time for more research	Visibility of profession (this is naturally improving, though)	Access to aerospace medicine training in Canada	Training program Promotion of occupational practice

About your life

What do you enjoy doing in your spare time?	Spending time with family, skiing, golf, gardening, travel	1. Tennis 2. Furthering my education 3. Music	Outdoor activities such as canoeing at the cottage, bike riding, artistic endeavours like interior design, participating in my children's sports and music programs. I spend a large amount of free time serving on various committees and Boards of Directors	Canoe Trekking
Does your family life ever suffer as a result of your career?	No	No	I am usually away from home at least once a month, sometimes longer so we hire help with housekeeping. I sometimes miss school events, but to balance things I try to bring the children when I travel to interesting places eg Europe, Japan	No
Job satisfaction (1-10; 10 being the best job in the world)	8.5/10	8.5	Probably 9 or 10.	9/10
One Sentence Summary	Extremely interesting, lucrative and diverse specialty with lots of opportunity to work in a variety of areas of clinical and academic practice.	A great specialty because of its options, remuneration, flexibility, and inherently interesting content.	My career has allowed me to be involved in collaborative interdisciplinary work that incorporates the commonalities between occupational medicine, aerospace medicine, and engineering, as well as innovative new technologies such as telemedicine and simulation, in order to enable the provision of exemplary medical care and programming.	Enjoyable career

Internal Medicine Occupational Medicine

About you

Occupation	Occupational & Medicine Specialist at Large	Occupational Medicine Specialist		Medical Director
Years in Current Practice	12	7	10	12
Type of Practice	Independent consult to industry and medical assessments for legal cases. Approximately 50% of my time is clinical 10% academic, 40% administrative	Government (consultant, research, teaching, clinical)	Mixed academic (teaching, research) and consulting	Consulting, academic
Division of Time/Time in research	I spend about 5-10% on research	Variable; approx 80-90% consultant/research; and 10-20% teaching/clinical)	Consulting 90%, research 10%	75/25
Family Status	Married	Married, 3 children	Married	Married

About the job

Average hours per week	40hrs	40	50-60	40
Three most common clinical complaints	Musculoskeletal Dermatology Mental health	Health protection, toxicology, medical surveillance	Respiratory, dermatology, toxicology, IAQ and environmental issues	musculoskeletal pain, psychological distress, causation of disease (eg cancer, COPD)
Adequately Paid	Comparable to the OMA rates without significant overhead costs	Yes (but I wouldn't turn down a raise), plus pension and benefits	Yes	Yes
What do you like the most about the career	Independence to structure my practice and work schedule. Remuneration is high. Stimulating and challenging work.)	Broad-based (ie a challenging mix of medicine, industrial hygiene, toxicology, epidemiology, research, teaching, advocacy, risk communication), unique issues and opportunities.	The variability, the diagnostic challenges, workplace assessments	Variety, challenge
What do you want to improve?	Increase the visibility of the program at the entrant level – my colleagues in other disciplines envy my work/life balance and are disappointed that they did not consider it.	More interaction with other Occ Med specialists (depending on where you practice, you may be “out on your own” somewhat)	Increase awareness of what the specialty has to offer	Nothing

About your life

What do you enjoy doing in your spare time?	Entertaining at my cottage, international travel, windsurfing.	Family, fitness (hockey, jogging, weight training, cycling); Canadian Forces Reservist; coaching children's sports teams; reading; photography.	sailing	Family activities, gardening
Does your family life ever suffer as a result of your career?	At times the workload can be over whelming so on occasion I have had to learn to cut back on my commitments, but there is no call or mandatory overtime so I think on the whole I would describe the impact on family life as minimal.	No	No	Work commitments occasionally interfere with vacation plans
Job satisfaction (1-10; 10 being the best job in the world)	9	9	9	9
One Sentence Summary	Occupational medicine offers a rewarding career with a rich set of practice options that remunerates well and provides excellent opportunity for work-life balance.	A great career path for those who: a) are “big-picture” thinkers, b) enjoy “cognitive diversity”, and c) are passionate about preventing illness/injury rather than just treating it.	Diagnosing diseases other physicians are unaware of	Great job, great career path.

Laboratory Medicine Anatomical Pathology

About you

Occupation	Skin Pathologist	Endocrine Pathologist
Years in current practice	10	22
Type of practice	Academic	Academic
Division of time	80% service, 20% research	30% service, 20% administration, 50% research
Family status	Married, with 2 children	Married, with 4 children

About the job

Occupation	Skin Pathologist	Endocrine Pathologist
Average hours per week	60–80	60–80
Three most common complaints	Timely reports, longer time for ordering consult by treating physician.	Bureaucracy gets in the way, sometimes too repetitive, lack of good clinical information results in waste of time chasing others.
Adequately paid?	No	Yes
Like the most?	It bridges between clinical parameters and science (translational research, clinical research, and basic research). There is an open field for academia and research.	Very exciting to be on the cutting edge of implementing new science into medicine.
Want to improve?	More subspecialized pathologists. More recognition by other physicians. More pay/compensation. More time for research. More fellowship programs.	Clinical profile of Pathologists as physicians.

About your life

Occupation	Skin Pathologist	Endocrine Pathologist
In your spare time?	Spending time with my family.	Sports, music, home renovation, travel.
Does family life ever suffer?	Better now with seniority.	Not significantly.
Job satisfaction (1–10)	7	9.5
One-sentence summary	Still good but could be improved much better.	—

Laboratory Medicine General Pathology

About you

Occupation	Pathologist
Years in current practice	20
Type of practice	Urban and suburban
Division of time	100% clinical
Family status	Married, three children

About the job

Occupation	Pathologist
Average hours per week	50
Three most common complaints	None. I love my job.
Adequately paid?	Yes
Like the most?	The variability—you learn something new every day.
Want to improve?	Nothing

About your life

Occupation	Pathologist
In your spare time?	Watch T.V., travel, socialize
Does family life ever suffer?	Rarely
Job satisfaction (1–10)	8–9
One-sentence summary	This is a specialty for people who like to read and learn new things. It is an ongoing learning process.

Laboratory Medicine Hematological Pathology

About you

Occupation	Hematopathologist	Hematopathologist
Years in current practice	4	18
Type of practice	Hospital	Academic, hospital based
Division of time	60% service/20% teaching/20% research	50% clinical, 40% administrative, 5% teaching, 5% research
Family status	Married, with 2 children	Married, with 2 children

About the job

Occupation	Hematopathologist	Hematopathologist
Average hours per week	40–60	60–80
Three most common complaints	Doctor complaints: Not sure if I would enjoy my job as much if I did just Pathology and did not still do some clinical patient work.	Patient complaints: Timely reports, management of bleeding, new leukemias/lymphomas
Adequately paid?	Yes	Yes
Like the most?	Challenging cases. Diverse field (i.e., blood films, bone marrows, hemoglobin electrophoresis, blood bank, coagulation testing, clinical lab). Good lifestyle.	The intellectual challenges of a highly specialized area and teaching.
Want to improve?	—	—

About your life

Occupation	Hematopathologist	Hematopathologist
In your spare time?	Being with family, sports, music.	Reading (including newspaper for current news and world affairs), traveling.
Does family life ever suffer?	Rarely.	It did occasionally when the children were younger.
Job satisfaction (1–10)	8	10
One-sentence summary	I love the job.	I would do it all over again—with greater intensity.

Laboratory Medicine Medical Microbiology

About you

Occupation	Medical Microbiologist/ Infectious Disease Specialist
Years in current practice	5
Type of practice	Academic
Division of time	Research (30%), management (50%), clinical (20%)
Family status	Married, with 2 kids

About the job

Occupation	Medical Microbiologist/ Infectious Disease Specialist
Average hours per week	50
Three most common complaints	Antimicrobial resistance, fever not yet diagnosed, hospital-acquired pneumonia
Adequately paid?	Yes
Like the most?	Mixed research/management/clinical responsibilities keeps things interesting, never a dull moment
Want to improve?	Nothing at this point

About your life

Occupation	Medical Microbiologist/ Infectious Disease Specialist
In your spare time?	Backpacking, canoeing, going up to the cottage
Does family life ever suffer?	Not significantly
Job satisfaction (1–10)	9
One-sentence summary	Great field of medicine!

Laboratory Medicine **Neuropathology**

About you

Occupation	Neuropathologist	Neuropathologist
Years in current practice	1.5	1.5
Type of practice	Hospital/Group	Hospital
Division of time	—	50% practice, 50% research
Family status	Single	Married, with 2 children

About the job

Occupation	Neuropathologist	Neuropathologist
Average hours per week	60–80	60–80
Three most common complaints	Neuro-oncologic	N/A
Adequately paid?	Yes	Yes
Like the most?	Great team and flexibility to do research.	Opportunity to blend medical practice with research.
Want to improve?	Reduce time spent on clinical work vs. research	Amount of research in Neuropathology.

About your life

Occupation	Neuropathologist	Neuropathologist
In your spare time?	I relax and drink fine wine.	Home renovation.
Does family life ever suffer?	Yes	Yes
Job satisfaction (1–10)	7	10
One-sentence summary	Great job but too many little things to keep track of. Would rather do fewer items at high volume (e.g., not four different teaching conferences but one, more frequently)	I love what I do.

Medical Genetics

About you

Occupation	Medical Geneticist	Clinical Geneticist
Years in current practice	4	3
Type of practice	Urban, >20 days per year	Academic, >20 days per year
Division of time	1–25%	1–25%
Family status	Married, with children	Single, no children

About the job

Occupation	Medical Geneticist	Clinical Geneticist
Average hours per week	35–50	51–70
Three most common complaints	1) Inadequate staffing across the country 2) Busy clinical practice in the context of an academic centre; can make it difficult to meet academic/research demands 3) The current billing schedule does not permit a Medical Geneticist to build up an independent practice if they wish	—
Three most common symptoms reported	—	1) Developmental delay; multiple congenital anomalies
Adequately paid?	Discrepancy in pay between the centres, thus difficult to answer this question	No
Like the most?	—	—
Want to improve?	Many of the things that would like to change are not specific to the practice of Genetics, but apply to being a clinician in an academic centre	Better support (staff, computers)

About your life

Occupation	Medical Geneticist	Clinical Geneticist
In your spare time?	Spend with children	Sailing, listening to opera
Does family life ever suffer?	Rarely	Sometimes
Job satisfaction (1–10)	7 to 8	7.5
One-sentence summary	Medical genetics can be very stimulating and rewarding specialty because of the wide variety of cases, ample opportunity for research, and flexible lifestyle.	Clinical genetics is a fascinating field that allows you to see interesting patients with their families, while actively participating in research, and therefore it never gets boring.

Neurology

About you

Occupation	Clinical Neurologist and Neuroscientist; Professor of Medicine (Neurology), Psychiatry, and Behavioural Neuroscience	Pediatric Neurologist	Pediatric Neurologist
Years in current practice	19	25	4
Type of practice	Urban: 30% clinical (teaching clinics) 30% teaching 40% research and administration	Teach >20 days per year, urban	Teach >20 days per year, urban
Division of time	As above	1–25%	25–50%
Family status	Married, three children	Married, no children	Married, children

About the job

Occupation	Clinical Neurologist and Neuroscientist; Professor of Medicine (Neurology), Psychiatry, and Behavioural Neuroscience	Pediatric Neurologist	Pediatric Neurologist
Average hours per week	60	51–70	51–70
Three most common symptoms reported by your patients	—	1) Developmental delay 2) Epilepsy 3) Headache	1) Myopathy 2) Multiple sclerosis 3) Developmental delay
Adequately paid?	Yes	Yes	Yes
Like the most?	Contact with students	Working with children	Diversity of patient issues, and clinical research
Want to improve?	N/A	Better hours	More time for reading

About your life

Occupation	Clinical Neurologist and Neuroscientist; Professor of Medicine (Neurology), Psychiatry, and Behavioural Neuroscience	Pediatric Neurologist	Pediatric Neurologist
In your spare time?	Read; dining with family	Raise horses	Exercise, family activities
Does family life ever suffer?	Rarely	Sometimes	Sometimes
Job satisfaction (1–10)	10	8	8
One-sentence summary	Terrific career for those who are self-starters and who enjoy independence.	Intellectual challenge of studying the nervous system with the privilege of working with children.	Pediatric neurology is demanding, but highly rewarding.

Nuclear Medicine

About you

Occupation	Nuclear Medicine
Years in current practice	21
Type of practice	Academic, hospital based
Division of time	—
Family status	Married, with 2 grown children

About the job

Occupation	Nuclear Medicine
Average hours per week	55
Three most common complaints	Cancer, heart disease, CNS disorders
Adequately paid?	Yes
Like the most?	Variety, changing technology.
Want to improve?	Funding to update equipment

About your life

Occupation	Nuclear Medicine
In your spare time?	Spending time with family, walking, movies, cooking
Does family life ever suffer?	When my kids were younger I had trouble balancing career with family
Job satisfaction (1–10)	8
One-sentence summary	After 28 years in the field I am very satisfied.

Obstetrics and Gynecology

About you

Occupation	Gynaecologic Oncologist	Reproductive Endocrinology and Fertility
Years in current practice	60	30 clinical, 20 other
Type of practice	Academic Hospital based	Academic, group practice
Division of time	Clinic 80%, Education/Research 20%	60% clinical, 30% administration, 20% research
Family status	Married, with 2 children	Married, with 4 children

About the job

Occupation	Gynaecologic Oncologist	Reproductive Endocrinology and Fertility
Average hours per week	35–50	51–70
Three most common symptoms reported by your patients	N/A	Infertility: irregular menses, male factor, unexplained
Adequately paid?	Yes—well remunerated for clinical and non-clinic work due to alternate payment plan	Yes
Like the most?	Direct patient care is very rewarding; great variety (surgery, chemo, palliative care)	The patient, the residents, the variety of procedures
Want to improve?	Access to care	I wish there were more answers to the questions

About your life

Occupation	Gynaecologic Oncologist	Reproductive Endocrinology and Fertility
In your spare time?	Computers, video games, music	Reading, running
Does family life ever suffer?	Did some during training, now very manageable	No
Job satisfaction (1–10)	8	8.5
One-sentence summary	I'm doing what I've always wanted to do and I'm making a difference!	I am very satisfied with my career choice.

Ophthalmology

About you

Occupation	Ophthalmologist	Ophthalmologist	Ophthalmologist	Ophthalmologist
Years in current practice	20	14	6	17
Type of practice	Urban/tertiary care teaching centre. Mainly private solo practice, with 30% administrative, teaching and clinic duties.	Urban, >20 days of teaching	Urban, >20 days of teaching	Urban, >20 days of teaching
Division of time	Clinical 70%; administrative, teaching, research 30%	1–25%	25–50%	None
Family status	Married, two children	Married, children	Married, children	Married, children

About the job

Occupation	Ophthalmologist	Ophthalmologist	Ophthalmologist	Ophthalmologist
Average hours per week	50–60	71–100	51–70	35–50
Three most common complaints	1) On-call duties at a multisite facility & regional transfer centre are busier, more complex, and more onerous than community hospitals 2) Lack of adequate OR time/wait lists 3) Battles with hospital administration over resources—difficult leadership in a resource-constrained environment—and time commitments for never-ending meetings	—	—	—
Three most common symptoms reported by your patients	—	1) Visual loss 2) Metamorphopsia	1) Uncontrolled glaucoma 2) Dense cataract 3) Glaucoma	1) Cataract
Adequately paid?	Yes	No	Yes	Yes
Like the most?	Challenges of patient care in my subspecialty work, and eye surgery—delicate, exacting, and rewarding. Never dull or routine. I enjoy what I do and am constantly improving and modifying my practice as new technology evolves.	Patient satisfaction	Surgical variety, bench-to-bedside research, vision, preservation and restoration, improving quality life for patients, surgical challenges	Positive satisfaction from treatment, teaching residents
Want to improve?	I will back away from the leadership role and free up more personal time in a few years	The hours worked	Additional protected time for research	Inability to control OR time

About your life

Occupation	Ophthalmologist	Ophthalmologist	Ophthalmologist	Ophthalmologist
In your spare time?	Organizer for community charity events, fitness centre on regular basis, family and friends	Raise children	Activities with children, mainly	Ski, golf, hike
Does family life ever suffer?	Occasionally	Sometimes	Rarely	Sometimes
Job satisfaction (1–10)	9	Money: 5, lifestyle: 5, job: 10 = 7 overall	10	8
One-sentence summary	Ophthalmology is an incredibly rewarding career—opportunity to create your own niche by varying the mix of medical care, surgical care, a broad range of subspecialty choices, and an exciting array of new technologies and treatment options.	High level of satisfaction, if you can get over the politics.	A unique career opportunity that combines surgery with medicine, direct visualization of ocular pathology, patient satisfaction, potential for new discoveries, and a balanced lifestyle.	Interesting, varied, changing specialty, which can be very rewarding.

Orthopedic Surgery

About you

	Orthopedic Spine and Trauma Surgeon	Orthopedic Surgeon	Orthopedic Surgeon Specializing in Musculoskeletal Oncology
Occupation			
Years in current practice	18	5.5	12
Type of practice	Academic hospital	Academic	Academic
Division of time	70% clinical, 20% teaching, 10% research and admin	75% clinical, 10% research, 15% teaching	60% clinical, 20% research, 10% administration, 10% education
Family status	Separated, 2 children age 14 and 16	Married, with 2 children	Married, with 2 children

About the job

	Orthopedic Spine and Trauma Surgeon	Orthopedic Surgeon	Orthopedic Surgeon Specializing in Musculoskeletal Oncology
Occupation			
Average hours per week	50–60	60	60 hours at the hospital, some on call, some clinical and research work at home evenings and weekends
Three most common symptoms reported by your patients	Not answered	Bone tumor, soft tissue tumor, metastatic bone disease	N/A
Adequately paid?	Spine work yes, trauma no	No	Yes
Like the most?	The challenge of spine deformity work	Wide variety of clinical problems, different anatomic regions, working with trainees	Fantastic job. Great pathology. Interesting clinical problems. Multidisciplinary with medical and radiation oncology, molecular pathology, musculoskeletal imaging. Lots of great transnational research, much of which leading to improvements in patient care and outcomes. This research allows for amazing traveling opportunities. Interacting with students, residents, and fellows means constant teaching and questioning—keeps things moving forward. Great opportunities to make major impact on patients' lives.
Want to improve?	Beds, OR time and implant budget	Better remuneration	Nothing. Great balance between work and academics as well as home/family/personal

About your life

	Orthopedic Spine and Trauma Surgeon	Orthopedic Surgeon	Orthopedic Surgeon Specializing in Musculoskeletal Oncology
Occupation			
In your spare time?	Golf, skiing, mountain biking	Golf, hockey, photography, movies, spending time with my family	Hockey, water and snow skiing, bike riding and running. Spending time with my kids, family and friends
Does family life ever suffer?	It has	Mildly	Depends on how you look at it. I'm clearly not home all the time but really not so much different that many friends and associates who are professionals in other realms. The balance is doable. The rewards of the profession and my job in particular are well worth some time sacrifice.
Job satisfaction (1–10)	9	8	10
One-sentence summary	Wouldn't want to do anything else...would be a 10 with the right resources.	Excellent job, quite stressful at times and remuneration could be better, otherwise entirely satisfied.	Wouldn't change what I do if I won the lottery.

Otolaryngology

About you

	Head and Neck Surgeon	Pediatric Otolaryngologist	Facial Plastic Surgeon, Director of Facial Plastic Surgery	Pediatric Otolaryngologist
Occupation				
Years in current practice	25	2.5	31	7
Type of practice	Urban	Urban	Urban and community hospital; mainly private, solo practice with minimal reaching responsibilities	Urban, >20 days/year dedicated to teaching
Division of time	80% clinical, 20% academic	95% clinical, 5% teaching	90% clinical, 10% teaching and research	1–25%
Family status	Married, children	Married, children	Married, 5 children	Married, children

About the job

	Head and Neck Surgeon	Pediatric Otolaryngologist	Facial Plastic Surgeon, Director of Facial Plastic Surgery	Pediatric Otolaryngologist
Occupation				
Average hours per week	70–80	50–70	70	51–70
Three most common complaints	1) Very demanding hours	1) Demanding on-call schedule	1) Inadequate hospital support for emergency and elective treatment	—
Three most common symptoms reported by your patients	—	—	—	1) Deafness 2) Cholesteotomas
Adequately paid?	No	No	OHIP component—grossly, grossly underpaid	No
Like the most?	Interesting field with a variety of disciplines and patients	Variety the career offers	It is a well-balanced medical and surgical specialty	Caring for children's family
Want to improve?	Better hours	Less busy call	To bring up the conditions in hospitals to the world standards in developed countries.	More time at home

About your life

	Head and Neck Surgeon	Pediatric Otolaryngologist	Facial Plastic Surgeon, Director of Facial Plastic Surgery	Pediatric Otolaryngologist
Occupation				
In your spare time?	Travelling, family events, golf	Golf, family events	N/A, other than during holiday time during which I ski, swim, and enjoy outdoor recreations	Rest
Does family life ever suffer?	Often	Sometimes	Always	Often
Job satisfaction (1–10)	10	7	8	5
One-sentence summary	An interesting and demanding career that combines clinical medicine and surgery.	A field that mixes surgery with medicine and may deal with a variety of patient populations.	This is a specialty demanding thorough scientific preparation, a high level of manual skill and artistic talent, and significant patience in dealing with psychological issues.	—

Physical Medicine and Rehabilitation

About you

	Physical Medicine & Rehabilitation	Physical Medicine & Rehabilitation	Physiatrist	Physiatrist	Physical Medicine & Rehabilitation
Occupation					
Years in current practice	25	23	4	4	7
Type of practice	Free-standing rehab facility/university	University health network 100%, full-time professor	Urban practice, teaching >20 days per year	Neurorehabilitation, urban practice, teaching >20 days per year	Urban practice, teaching >20 days per year
Division of time	70% clinical, 15% teaching, 15% research and administration	50–60% clinical, 20–30% research/teaching, 10% administrative	25–50%	1–25%	25–50%
Family status	Married, children	Married, children	Married	Married	Married, children

About the job

	Physical Medicine & Rehabilitation	Physical Medicine & Rehabilitation	Physiatrist	Physiatrist	Physical Medicine & Rehabilitation
Occupation					
Average hours per week	50–60	50–60	51–70	N/A	51–70
Three most common complaints	—	1) Lack of successors as academic careers are not lucrative.	1) Lots of paperwork 2) Too much to do 3) Going to court as an expert witness	—	—
Three most common symptoms reported by your patients	—	—	—	1) Spinal cord injury (tetra/paraplegia, spasticity, pain) 2) MS (fatigue, weakness) 3) ALS (weakness, swallowing, and respiratory dysfunction)	1) Cognitive impairment 2) Post-concussion syndrome 3) Behavioural impairment
Adequately paid?	Yes	From an academic viewpoint, no; however, medicolegal is adequately paid	Yes	Yes	Yes
Like the most?	It's fun and interesting	Tremendous amount of versatility and multiple skills that allowed me to take my career to very high levels, whatever aspect I wanted to pursue	Getting to know patients well by following them longitudinally through a very difficult time in their lives	Variety—functional/quality of life approach to management of diverse neurological conditions	Variety with clinical and research
Want to improve?	—	Bureaucracy in health services, academic institutions, etc. has grown, restricting my ability to provide care	Less paperwork	More support for rehabilitation technologies; less paperwork to insurance companies	To have all inpatient beds located at one site; to remove need to travel between sites

About your life

Occupation	Physical Medicine & Rehabilitation	Physical Medicine & Rehabilitation	Physiatrist	Physiatrist	Physical Medicine & Rehabilitation
In your spare time?	Snowmobiling, cottage	Tae kwon do, kung fu, weight training, motorcycle riding, writing, singing, dancing	Sailing, gardening, entertaining	Play basketball, kayak, ski, international volunteer medical work, volunteer on numerous provincial and national boards/committees	Parent, coach children's soccer and hockey, run marathons and distance races
Does family life ever suffer?	Rarely	Sometimes	Rarely	Sometimes	Sometimes
Job satisfaction (1–10)	9	8	8	8	8
One-sentence summary	A career that is great for people who want a career that is fun, interesting, and one where you can change your focus of interest at any time.	PM&R is the most versatile medical subspecialty I can think of; it provides in-depth neuro-musculoskeletal training, as well as general medical knowledge and insight into psychiatric/psychological domain and understanding of disability.	Great for people who like to have a broad approach to medical issues, team work, continuity of care, complex problems.	PM&R allows you as a doctor to make a positive impact on quality of life for persons with disability, and their families, through holistic and interdisciplinary medical management.	Predictable hours, patient contact and great team environment to work in.

Psychiatry

About you

	Psychiatrist	Psychiatrist	Psychiatrist (Clinician Scientist)	Psychiatrist (Genetics Researcher)	Emergency Psychiatrist, Medical Education
Occupation	Psychiatrist	Psychiatrist	Psychiatrist (Clinician Scientist)	Psychiatrist (Genetics Researcher)	Emergency Psychiatrist, Medical Education
Years in current practice	33	27	11	5	13
Type of practice	Community	Urban	Urban practice; teach students/ residents/fellows >20 days per year	Urban practice; teach students/ residents/fellows >20 days per year	Urban practice; teach students/ residents/fellows >20 days per year
Division of time	100% clinical	70% clinical, 30% academic	75–100%	75–100%	1–25%
Family status	Married, children	Married, children	Married/partner, children	Married/partner	Single

About the job

	Psychiatrist	Psychiatrist	Psychiatrist (Clinician Scientist)	Psychiatrist (Genetics Researcher)	Emergency Psychiatrist, Medical Education
Occupation	Psychiatrist	Psychiatrist	Psychiatrist (Clinician Scientist)	Psychiatrist (Genetics Researcher)	Emergency Psychiatrist, Medical Education
Average hours per week	70–80	40–50	51–70	51–70	51–70
Three most common complaints	1) Often no cure for disease 2) Can be frustrating	1) Shortage of services	—	—	—
Three most common symptoms reported by your patients	—	—	1) Schizophrenia 2) Psychotic disorders 3) Drug side effects	1) Schizophrenia 2) Psychosis 3) Cognitive impairment	1) Suicide 2) Depression 3) Psychosis
Adequately paid?	Yes	Yes	Yes	Yes	—
Like the most?	Great lifestyle	Variety of patients and opportunities	Research, novelty, always changing; the students keep me young, the discoveries keep me excited; very supportive colleagues; recognition of the fact that this research makes a difference	Flexibility, control over time, pursuits as a researcher	Variety, stimulation, drama, intellectual curiosity
Want to improve?	More manpower and funding	More funding to improve quality of services for psychiatric patients	Nothing really; it has its challenges, but not disproportionately so	Increase funding for research	Have fewer meetings

About your life

	Psychiatrist	Psychiatrist	Psychiatrist (Clinician Scientist)	Psychiatrist (Genetics researcher)	Emergency Psychiatrist, Medical Education
Occupation	Psychiatrist	Psychiatrist	Psychiatrist (Clinician Scientist)	Psychiatrist (Genetics researcher)	Emergency Psychiatrist, Medical Education
In your spare time?	Spend time with family	Movies, readings, family events	Sail, cook, read, raise children	Nightclubs, music, photography, read, travel, party	Travel, film
Does family life ever suffer?	Sometimes	Sometimes	Sometimes	Rarely	Sometimes
Job satisfaction (1–10)	8	8	9	9	8
One-sentence summary	A career that is great for people who enjoy an accommodating lifestyle.	In most cases, psychiatry allows me to help improve the lives of people suffering from a variety of issues.	The clinical neurosciences in psychiatry is at its pivotal junction with the advent of genomics and neuroimaging; we are where the space program was in the 1960s—don't miss out on it.	My practice is not really typical of psychiatrists since I mostly do research; basically, I didn't enjoy constant clinical work, and the lack of knowledge about the diseases I was treating motivated me towards basic disease-mechanism research.	Psychiatry adds depth to medicine in the understanding of people and their illnesses. We treat the whole person, not just a symptom or bodily system. It is a great honour to be allowed into people's inner worlds.

Radiation Oncology

About you

Occupation	Radiation Oncologist	Radiation Oncologist	Radiation Oncologist
Years in current practice	15	7	8
Type of practice	Urban, >20 teaching days per year	Urban, >20 teaching days per year	Urban, >20 teaching days per year
Division of time	1–25%	1–25%	1–25%
Family status	Married, children	Married, children	Married, children

About the job

Occupation	Radiation Oncologist	Radiation Oncologist	Radiation Oncologist
Average hours per week	51–70	45, plus some work at home	51–70
Three most common symptoms reported by your patients	—	—	1) Symptom palliation in lung cancer 2) Brain metastases 3) Adjuvant pelvic radiation for rectal cancer
Adequately paid?	Yes	Yes	Yes
Like the most?	Flexibility; the opportunity to do something that really matters for patients and families; working with students	Combination of patient care, research, and teaching	Helping patients
Want to improve?	Better control of my own schedule; group practice doesn't always allow for this	Have less hours	Fewer consults and more time for teaching and research

About your life

Occupation	Radiation Oncologist	Radiation Oncologist	Radiation Oncologist
In your spare time?	Kids, horse ride, play harp, ceramics, read, coach sports	Read, look after kids, paint	Spend time with my kids, reading, sports
Does family life ever suffer?	Sometimes	Sometimes	Rarely
Job satisfaction (1–10)	8	7–8	7
One-sentence summary	The opportunity to balance patient care with the use of high-tech equipment in a group setting with a decent lifestyle is probably easier to obtain in this specialty than most.	Very satisfying job with an interesting combination of technology and profound human interaction. By and large, people are very happy—have not met a grumpy Radiation Oncologist.	Radiation Oncology offers great patient contact, research, and teaching opportunities, AND you can still have a life outside your job.

Urology

About you

Occupation	Pediatric Urology	Urological Surgeon	Pediatric Urologist	Urological Surgeon
Years in current practice	18	25	10	20
Type of practice	60% clinical, 40% administration work as Division Chair, Research, and Fellowship teaching	Teaching and clinical cases	Teach day, urban hospital >20 days, urban	Urban; >20 days/year dedicated to teaching
Division of time	10–15%	5%	1–25%	1–25%
Family status	Married, children	Single	Married, children	Married, children

About the job

Occupation	Pediatric Urology	Urological Surgeon	Pediatric Urologist	Urological Surgeon
Average hours per week	65–70	45	51–70	71–100
Three most common symptoms reported by your patients	1) Genital reconstruction surgery 2) Urinary tract obstruction 3) Urinary tract infections as a result of vesico-ureteric reflux	1) Erectile dysfunction 2) Urinary tract infections 3) Prostate disease	1) Incontinence 2) Infection 3) Antenatal diagnosis on ultrasound	1) Incontinence 2) Increased PSA 3) Frequency/nocturia
Adequately paid?	Yes	No	Yes (is it ever enough?)	No
Like the most?	Great mix of teaching, academically challenging medical and surgical cases, and research	Work in erectile dysfunction and prostate disease	I know everything about a small amount	Training residents; patient satisfaction with resolution of their complaints
Want to improve?	Nothing, we have a wonderful work environment in Canada compared to many other developed countries	Access to the OR and waiting lists	Better access to resources to allow me to do what I was trained to do	Cannot improve without increased manpower and OR time

About your life

Occupation	Pediatric Urology	Urological Surgeon	Pediatric Urologist	Urological Surgeon
In your spare time?	Golf, tennis, travel, read	Sports	Exercise, read, eat out	Cottage, travel, enjoy my car
Does family life ever suffer?	No	Sometimes	Sometimes	Often
Job satisfaction (1–10)	8.5	5	6	8
One-sentence summary	Find something that you love to do; every specialty has its advantages and disadvantages. Learn to be content with what you are.	Great lifestyle; excellent mix of open and endoscopic cases. Many of cases I work on deal with quality-of-life issues. After surgery I see very happy and satisfied patients.	Long haul, lots of training. You will be old when you start your first job...but, it is the best of a bad lot, and you will be surprised at how rewarding the job is, particularly when you least expect it.	Great specialty; always new innovations technically; excellent patient satisfaction; generally upbeat specialty compared to other surgical specialties.

Data below on average physician salaries by specialty and province were compiled by the Canadian Institute for Health Information in 2004.

Average gross fee-for-service payment per physician who received at least \$60,000 in payments by Physician Specialty and Province, 2008-2009.

Specialty	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	224,054	230,605	209,432	224,378	186,467	236,238	243,151	259,836	277,491	230,627	229,177
Medical Specialties	352,241	220,661	252,971	295,663	217,021	319,473	252,105	335,244	350,591	280,322	287,665
Internal Medicine	392,215	270,189	267,840	384,954	256,102	389,028	275,338	415,631	417,179	377,626	345,358
Neurology	213,444	*	422,196	333,649	226,651	268,549	251,678	306,692	357,804	268,176	263,296
Psychiatry	253,241	222,837	173,780	155,001	127,265	202,809	191,230	224,530	296,202	186,845	194,724
Pediatrics	271,839	*	235,943	289,498	195,341	273,055	244,878	285,927	291,532	241,778	247,250
Dermatology	478,734	*	319,146	366,712	269,059	368,311	394,094	*	708,053	354,939	362,830
Physical Medicine	n/a	n/a	164,937	*	193,089	237,054	234,420	*	219,817	246,632	225,735
Anesthesia	376,209	141,275	262,678	218,481	203,676	363,139	263,636	284,881	335,651	271,379	300,478
Surgical Specialties	396,825	324,089	396,931	383,754	295,203	438,251	393,583	486,675	510,982	396,033	400,432
General Surgery	356,285	354,670	362,495	352,261	248,876	411,756	392,433	416,020	451,243	354,129	360,052
Thoracic/CV Surgery	*	n/a	*	394,109	350,236	489,951	412,235	734,749	668,715	381,049	453,182
Urology	354,600	*	512,006	430,220	335,132	422,458	316,894	430,331	494,320	417,790	404,757
Orthopedic Surgery	460,601	*	337,347	330,757	243,474	412,246	371,187	421,208	421,408	305,894	354,044
Plastic Surgery	*	*	342,903	318,032	230,989	321,231	395,862	419,495	428,040	262,868	312,751
Neurosurgery	*	n/a	*	n/a	182,278	473,783	*	488,343	*	435,246	353,015
Ophthalmology	510,144	515,448	501,803	704,259	438,900	596,183	535,754	864,122	779,997	655,789	589,351
Otolaryngology	469,727	*	348,330	342,646	291,262	400,154	310,704	456,563	537,810	388,005	374,549
Obstetrics/ Gynecology	292,950	183,801	320,921	272,561	295,203	424,499	371,060	400,799	471,690	330,566	376,107
Total Specialties	369,770	273,475	326,302	338,951	243,159	358,187	296,405	398,209	407,472	321,188	326,353
Total Physicians	280,507	246,105	251,510	275,904	214,932	300,130	271,478	316,433	326,714	269,562	275,637

Source: National Physician Database, Canadian Institute for Health Information (CIHI)

Notes:

* Data was suppressed - please see the Methodological Notes, Data Suppression Section of the CIHI National Physician Database publication for details.

N/A: not applicable - there were no physicians for this specialty for this province.

Due to the variation in the proportion that fee-for-service payment is of total physician compensation in each jurisdiction, comparisons across jurisdictions should be made with caution.

Based on gross payments.

Alternative forms of reimbursement, such as salary and capitation are not included.

Section E

LOCATION PROFILES

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E-2	Provincial Residency Salaries	179

This section examines the different medical schools across the country and additional location-specific factors that may influence your decision to study in a particular area. Note that summaries for the Université de Montreal, Université de Sherbrooke, and Université Laval are not included in this section, but can be viewed in the French version.

SOURCES:

University Profiles

http://www.aucc.ca/can_uni/our_universities/index_e.html

About the City

<http://www.cic.gc.ca>

<http://www.cmhc-schl.gc.ca/en/index.html>

<http://www.remax.ca>



DALHOUSIE UNIVERSITY

1236 Henry Street, Halifax, NS B3H 3J5
Tel: (902) 494-2450, Fax: (902) 494-1630

The University

One of Canada's leading universities, Dalhousie is widely recognized for outstanding academic quality and teaching, and a broad range of educational and research opportunities. Located in Halifax, Nova Scotia since 1818, Dalhousie attracts students from around the world. They inspire students, faculty, staff, and graduates to make significant contributions to the Atlantic region, Canada, and the world. With 11 faculties and more than 3,600 courses in 180 areas of study, Dalhousie offers students a wealth of choice and flexible degree programs.

The historic, tree-lined campus of Dalhousie combines the welcoming atmosphere of Canada's east coast with the international prestige of a big-name school. Located in the south end of Halifax, Nova Scotia, on Canada's east coast, Dalhousie occupies more than 79 acres of attractive grounds surrounded by a primarily residential area. The university also offers close proximity to major teaching hospitals, provincial and federal research laboratories, and the provincial archives. Dal also boasts an extensive system of libraries, a sophisticated computing infrastructure, and major recreation facilities.

The caliber of Dalhousie's faculty is the key to their reputation as an academic leader. As Atlantic Canada's leading research university, Dalhousie attracts more than \$100-million in research grants and awards annually. Faculty members are nationally and internationally recognized for their achievement, research, and teaching. According to a survey conducted by The Scientist magazine, Dalhousie was named the best non-commercial scientific institute in which to work in Canada. The Scientist, a prestigious American-based science magazine, surveyed 1,623 tenured or tenure-track life scientists working in academia or other non-commercial research organizations.

Dalhousie is home to more Canada Research Chairs (45) than any other university in the region. Chairholders advance the frontiers of knowledge in their fields, not only through their own work, but also by teaching and supervising students and coordinating the work of other researchers. Research ranges from fundamental philosophical questioning concerning the development of new health technologies to lab research on proteins in nerve cells to understand and advance nervous system repair.

Dalhousie is one of North America's most dynamic university communities.

About Halifax: Facts and Figures

Dalhousie is located in the heart of Halifax, a lively coastal city of 360,000, for almost 200 years. Halifax is Canada's largest city east of Montreal, and is situated on the world's second largest natural harbour. Halifax was the site of the first British town in Canada, founded in 1749. Since then, the area has evolved to be home for a diverse mix of people. Charming fishing villages and farming communities can be found all along the Atlantic Coast. Nature has blessed this area with sandy beaches, rugged shorelines, and colourful gardens.

In the heart of the downtown there are art galleries, museums, historic sites and churches, shopping, sidewalk cafés and friendly nightclubs. Lively pubs and entertainment, spectacular shows, first class sporting events, live theatre on both sides of the harbour, and scrumptious dining are all a part of the Halifax experience. Throughout the year there are music festivals, live theatre, outdoor concerts, symphony performances and good old fashioned Celtic ceilidhs. Not far from the downtown, nearby coastal communities offer hiking, camping, and bird watching.

Employment

Halifax unemployment rate (October 2007) 5.5%

Main language spoken in homes

English: 92.3%, French: 2.86%, Both: 2.85%, Other: 4.56%

Largest minority language groups

Chinese, Arabic, Greek, Polish, Italian, Urdu

Aboriginal population

3,525 (0.98% of the urban population)

Family and housing

Avg monthly rent for a two-bedroom (2005) \$762

Avg residential house price (2006) \$210,255

Climate

Avg January temperature (°C) -5

Avg July temperature (°C) 18

Avg annual "snow" (cm) 152

Avg annual "rain" (mm) 1,356

McGILL UNIVERSITY

845 Sherbrooke Street West, Montreal, QC H3A 2T5
Tel: (514) 398-4455, Fax: (514) 398-3594

The University

With Mount Royal as a backdrop, McGill's main campus is set in the heart of the second-largest French-speaking city in the world.

The campus is a mosaic of heritage and modern buildings laid out around an oasis of green space facing Montreal's commercial district. Founded in 1821 thanks to a generous bequest by Montreal merchant James McGill, McGill University is one of North America's leading research institutions. Because of our cutting-edge facilities and innovative research programs McGill researchers attract more funding, publish more, and are cited more often than researchers at any other Canadian university.

With an international reputation built on strong academics, McGill's 21 faculties and professional schools offer degrees in more than 300 disciplines. The university has six affiliated teaching hospitals, 73 research institutes, four remote research stations, and a network of 17 libraries. It is also home to five major museum collections, including the 600-acre Morgan Arboretum, the largest in Canada, which is located a short drive west of downtown and known as the Macdonald Campus.

McGill offers students unparalleled opportunities to enrich their educational experience through exchange programs, internships, and field study programs. The university recognizes and honours academic distinction and leadership qualities through an extensive program of entrance awards and scholarships. It provides about \$8 million each year in undergraduate scholarships and student aid.

About Montreal: Facts and Figures

Montreal (Montréal) is unique in North America, blending a brash New World urbanity with the romantic charm of its European-flavoured historic districts and a Gallic sense of *joie de vivre*. There is much to do in Montreal, including strolling down the cobblestone roads in old Montreal, hiking on the city's landmark Mont-Royal, enjoying a nice latte at one of the beautiful cafes on St-Denis, shopping at the number of amazing stores on Ste-Catherine, enjoying a night out at the many night clubs on Crescent, going to the many museums of Montreal, cheering on at hockey games at the Bell Centre, and much more.

Main language spoken in homes

English: 12%, French: 68%, Other: 19.7%

Family and housing

Avg monthly rent for a two-bedroom (2007) \$800

Avg residential house price (2007) \$192,180

Climate

Avg January temperature (°C) -15

Avg July temperature (°C) 26 (with humidity)

Avg annual "snow" (cm) 226

Avg annual "rain" (mm) 835

McMASTER UNIVERSITY

1280 Main Street West, Hamilton, ON L8S 4L8
Tel: (905) 525-9140

The University

Founded in 1887, McMaster University owes its origin to the personal fortune of Senator William McMaster, one of Canada's most successful entrepreneurs of the 19th century. Today, McMaster University's beautiful, tree-lined campus bustles with more than 20,000 full-time and part-time students and boasts some of the best facilities in Canada, including a research nuclear reactor, an extensive library system, and one of the finest public art galleries in the country. These facilities support a rich variety of programs that have made McMaster one of the top teaching and research institutions in Canada. Our innovations are many: the first medical school to train doctors using small-group, problem-based learning; unique limited-enrolment programs in arts and science and health sciences that promote in-depth interaction of students and faculty across the disciplines; and programs that stress critical thinking and problem-solving skills to give our graduates an edge in the emerging knowledge-based, global economy. In addition, McMaster offers cooperative education, internships, and experiential education, which allows many students to combine their studies with employment experience.

About Hamilton: Facts and Figures

Hamilton is an underrated city of 500,000 people surrounded by the beautiful suburbs of Ancaster, Dundas, and Burlington. There are many houses, townhouses, apartments, and condominiums to rent or buy in all price ranges. The geographical location is great, as it is less than an hour's drive from both the big city of Toronto and the wondrous Niagara Falls. Additionally, Hamilton is close to the United States border and Buffalo.

Transportation is not a problem in Hamilton and you can survive without a car, as the bus system covers the entire city and runs regularly. To travel around the province, there is a GO bus station as well as a Greyhound bus station. A short 10-minute drive will take you to the Aldershot VIA rail train station. Furthermore, Hamilton boasts its own international airport, saving you time when attending conferences or going on vacation.

There are many different entertainment venues in Hamilton; many museums, art galleries, and arenas can keep you busy. Hamilton's largest arena, Copps Coliseum, is the place to see concerts as well as the Hamilton Bulldogs hockey team, and Hamilton Place is the setting for comedy acts, concerts, orchestra performances, as well as other special events. The Hamilton TiCats play at Ivor Wynn Stadium and the Canadian Football Hall of Fame is in the downtown core. Hamilton boasts Ontario's third-largest art gallery, The Art Gallery of Hamilton. In terms of outdoor recreational activities, Hamilton has several accessible golf courses, conservation areas, bike trails and hiking trails; specifically, the beautiful Webster's Falls. For nightlife, Hess Village is a street downtown lined with pubs, restaurants, and nightclubs. There are many restaurants to choose from in the city serving many different varieties of food. One place to find fresh and cheap fruit, vegetables, produce, and baked goods is the Jackson Square Farmer's Market.

Employment

Hamilton unemployment rate (2007) 5.8%

Main language spoken in homes

English: 98%, French: 2.0%

Largest minority language groups

Italian, Polish, Portuguese, German, Croatian, Chinese, Spanish

Family and housing

Avg monthly rent for a two-bedroom (2003) \$778

Avg residential house price (2007) \$225,000

Climate

Avg January temperature (°C) -5

Avg July temperature (°C) 21

Avg annual "snow" (cm) 162

Avg annual "rain" (mm) 765

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

PO Box 4200, Station C, St. John's, NL A1C 5S7

Tel: (709) 737-8000

The University

Memorial University of Newfoundland is the largest university in Atlantic Canada, with approximately 18,000 students. The Faculty of Medicine has been producing highly qualified doctors for over 40 years. If you speak with Memorial residents you will find that they are very pleased with the quality of education and vast amount of clinical experience they receive. The university is situated in St. John's, the oldest and most easterly city in Canada.

About St. John's: Facts and Figures

Known for its friendly people and rugged beauty, the capital of Newfoundland and Labrador, with a population of about 180,000, offers a smaller city atmosphere with the amenities and attractions of a much larger city. There are many attractions in the region, and the province is a mecca for outdoor enthusiasts. The Grand Concourse is an integrated walkway system for the cities of St. John's and Mount Pearl and the Town of Paradise. Its 120 kilometres of walkways link every major park, river, pond, and green space in the three municipalities, providing a beautiful trek for all levels of fitness. Outside of the city, the East Coast trail provides a real adventure, covering over 540 kilometres. Along the way, one will see cliffs, fjords and the ruggedness of the Atlantic Ocean.

There are opportunities for those interested in sports, and many members of the medical community take part in local leagues. Every summer, the Royal St. John's Regatta at Quidi Vidi Lake attracts competitive rowers from all around the world as well as over 50,000 spectators. It is officially the oldest continuing sporting event in all of North America!

Apart from its natural beauty and sporting events, St. John's is also known for its devotion to arts. There are countless music and theatre festivals held throughout the year, showcasing the talent of Newfoundland musicians. One of the most well recognized events is the Festival 500 "Sharing the Voices," an international festival of choral music, held every two years. The nightlife and downtown scene, including the legendary George Street, have a reputation for being the best in the country. The

street is lined with bars and pubs and is closed to traffic during the night and most of the business day to allow free rein to pedestrians. It actually has the most pubs per square foot of any street in North America, as well as having some of the latest bar-goers in Canada. The street is still busy even at five or six in the morning!

Transportation is easy, boasts an efficient bus system, and a 15-minute drive will bring you to any of the four major hospitals. There is also excellent city-wide public transit. The climate is temperate, and while St. John's has its share of snow, the summer weather can be quite nice.

Come experience the island in the east, and you won't be disappointed!

Employment

St. John's unemployment rate (2007) 6.7%

Main language spoken in homes

English: 97.8%, French: 1.7%, Other: 0.5%

Largest minority language groups

Chinese, Greek, Spanish, Polish

Aboriginal population

655 (0.5% of the urban population)

Family and housing

Avg monthly rent for a two-bedroom (2007) \$635

Avg residential house price (2003) \$120,000

Climate

Avg January temperature (°C) -3

Avg July temperature (°C) 15

Avg annual "snow" (cm) 322

Avg annual "rain" (mm) 1,191

NORTHERN ONTARIO SCHOOL OF MEDICINE

West Campus

955 Oliver Rd., Thunder Bay, ON P7B 5E1

Tel: (807) 766-7300, Fax: (807) 766-7370

East Campus

935 Ramsey Lake Rd., Sudbury, ON P3E 2C5

Tel: (705) 675-4883, Fax: (705) 675-4858

The Northern Ontario School of Medicine (NOSM) opened its doors in September 2005 as the first new medical school in Canada in more than 30 years. NOSM is also the first Canadian medical school hosted by two universities: Lakehead University (or the "West Campus") in Thunder Bay and Laurentian University (or the "East Campus") in Sudbury. Despite a close relationship with the host universities, NOSM is the only Canadian medical school that exists as a stand-alone not-for-profit corporation with its own by-laws and Board of Directors. In addition, education at NOSM is not restricted to Thunder Bay and Sudbury, but takes place in remote, rural, small and large urban communities across Northern Ontario.

In 2005, the Charter Class of the NOSM MD Program began its studies with 32 medical students based at the East Campus and 24 at the West Campus. In 2007, NOSM welcomed its first residents into the Family Medicine Residents of the Canadian Shield program. Though communities in Northern Ontario have hosted medical residents for decades, this was the first

time medical residents were trained in a program developed and administered in the North. This program is two years in duration and it accepts 30 residents per year. In addition, NOSM will eventually offer residency training in eight major general specialties: Anesthesiology, General Internal Medicine, General Surgery, Orthopedic Surgery, Obstetrics/Gynecology, Pediatrics, Psychiatry, and Community Medicine.

To connect its students dispersed across a vast geographic area and to facilitate its unique distributed learning model, NOSM is supported by a network of broadband digital technology. NOSM also features a unique research program that targets topics with particular relevance to Northern populations. In all programs there is a particular focus on Aboriginal and Francophone populations.

NOSM seeks to develop physicians who are able to practice anywhere in the world but who have a particular understanding of Northern and rural populations. NOSM graduates will be resourceful, have a preference for collaborative care settings, and take an interprofessional approach to practice and research. The context of the School is Northern, but the applications are national and international.

About Northern Ontario

Northern Ontario comprises 90% of Ontario's land area but less than 10% of its population. Northern Ontario spans over 800,000 km² from the Muskoka region in the South (less than 2 hours' drive from Toronto), to the Nipissing and Temiskaming regions in the East, to the Hudson and James Bay coasts in the North, to the Manitoba border in the West. The region is economically, politically, socially and geographically distinct from the rest of the province.

Approximately 750,000 people call Northern Ontario home. There is a large Francophone population especially in the Northeast, and French is widely spoken there. Aboriginal groups are also prominent, not just in rural and remote communities, but within urban areas as well. In addition, the larger urban areas feature even greater diversity of cultures and ethnicities.

The largest city in Northeastern Ontario is Sudbury with a population of 158,000, and the largest city in Northwestern Ontario is Thunder Bay with a population of 109,000. These communities serve as economic and educational hubs in addition to hosting the two main campuses of NOSM. There are three other urban communities: Sault Ste. Marie, North Bay and Timmins. In addition, many Northern Ontarians live in rural and remote communities stretching across the region.

Mining and forestry are the two major industries in Northern Ontario, with manufacturing, transportation and tourism also contributing to the economy.

Northern Ontario is a region of four distinct seasons. Summers are pleasantly warm in Northern Ontario, with cottagers from across North America escaping to the region for its climate and beautiful waterfront settings. You can also expect the full winter experience; most of the region is notorious for snow and cold temperatures in the winter months.

All of the North features outdoor recreational opportunities in all seasons. Skiing, snowboarding, snowmobiling, snowshoeing, skating, ice hockey and curling are popular in the winter; while fishing, canoeing, kayaking, camping and hiking are popular in the summer. In addition, communities large and small feature seasonal festivals, music and movie festivals, theatre groups, league sports, nightlife, museums, art galleries, and more.

QUEEN'S UNIVERSITY

99 University Avenue, Kingston, ON K7L 3N6
Tel: (613) 533-2000, Fax: (613) 533-6300

The University

Queen's University is one of Canada's most prestigious post-secondary institutions, internationally renowned for fostering scholarship, research, spirit, and diversity. Established by Royal Charter of Queen Victoria in 1841, students have been known to brag that Queen's is "Older than Canada!" — founded 26 years before Confederation. Over the past 150 years of educating the best and brightest, Queen's has produced countless influential Canadians who have shaped Canada's political, cultural, and scientific landscape.

One of the characteristics unique to Queen's is the university's commitment to placing students at the centre of the university community. There are few places in Canada with such school pride and collegiality between the students, faculty, and community.

The campus itself is located on the shore of Lake Ontario, a scenic five-minute stroll from downtown Kingston. Kingston General Hospital is located on campus, along with most of the other professional schools, including Law, Commerce, and the school of Public Health. There are six main libraries containing 2.3 million volumes and access to over 14,000 electronic journals. The campus is an ivy-covered limestone paradise, crossed by paths and peppered with parks and public art. A particular point of pride is the Agnes Etherington Art Centre, displaying two Rembrandts alongside featured exhibits and local artists' work.

About Kingston: Facts and Figures

From a city so steeped in heritage, you would expect nothing less than excellence in the arts, and Kingston doesn't disappoint. There are 19 local galleries and museums, the Kingston Haunted Walk, and the 100-year-old Kingston Market selling the products and produce of local artisans and farmers. The Kingston Symphony Orchestra has delighted music lovers for 51 seasons, and countless festivals run throughout the year, including September's Jazz Festival, Chilifest, and the Reelout and Kingston Canadian Film Festivals.

The majestic lakefront location provides Kingstonians with many opportunities for outdoor activities along the miles of waterfront pathways. Take the ferry across to Wolfe Island for an afternoon of hiking or paddling, or spend a few hours on the Thousand Islands Boat Cruise before heading back downtown for dinner at one of the many eclectic restaurants, coffee shops, and bistros.

Kingston ranked among the best cities in Canada by Canadian Business magazine in 2006 for its diversity, opportunity, and quality of life. The waterfront, architecture, urban life, and music scene provide a vibrant backdrop to a tolerant and welcoming community.

Family and housing

Avg monthly rent for a two-bedroom (2003) \$768
Avg residential house price (according to Canadian Business magazine, 2007) \$207,926

12.6% of people walk to work.

Climate

Avg January temperature (°C) -7

Avg July temperature (°C) 20

Avg annual "snow" (cm) 181

Avg annual "rain" (mm) 795

UNIVERSITY OF ALBERTA

114 St. - 89 Ave., Edmonton, AB T6G 2E1

Tel: (780) 492-3111

The University

The University of Alberta, one of Canada's premier research universities, is situated in the heart of Edmonton on the picturesque south bank of the North Saskatchewan River. It also boasts one of North America's top libraries, with more than 9 million books and resources. Areas of established and emerging research excellence on a national or international scale include medicine, chemistry, engineering, social policy, and English literature. The University of Alberta has more than 3,300 faculty members and more than 30,000 undergraduate and graduate students. Fifty-eight members of the Royal Society of Canada are among a faculty that leads the country in 3M Awards for Teaching Excellence — Canada's highest undergraduate teaching honour. The University of Alberta's Industry Liaison Office has spurred development of 38 active spinoff companies and has put the University of Alberta in the number one position in Canada for licensing revenues. The main campus has more than 90 buildings on 89 hectares of land in the heart of Edmonton, Alberta's capital city, which has a population in the metro area of roughly 930,000.

About Edmonton: Facts and Figures

Edmonton, the capital city of the province of Alberta, is known for its extensive park system that runs throughout the city. Just a short drive from the Rocky Mountains, Edmonton's cold but sunny winters and pleasant summers make it an ideal place for those looking for a city atmosphere with an abundance of nature within easy reach. The Banff and Jasper National Parks are just a few hours drive away, offering great skiing in winter and beautiful hiking and sightseeing opportunities year-round.

Edmonton was rated as one of the top three places to live in Canada based on a study of North America's cities that surveyed living cost, transportation, job outlook, education, climate, crime, the arts, health care, and recreation. Edmonton is experiencing very strong economic growth stemming from the oil sands projects in northern Alberta, which has fuelled all sectors of the economy including health. According to the 2005 census Edmonton had a population of over 700,000, although the recent growth has certainly catapulted that number much higher.

The provincial government, in partnership with the University and Capital Health Region (among other partners), has recently invested heavily in a number of exciting initiatives for Edmonton and the regions it serves, including:

- ▶ the Alberta Diabetes Institute, a premier research facility aimed at bringing together world leaders in the prevention, treatment, and cure of diabetes through excellence in research and collaboration, and
- ▶ the Edmonton Clinic, the largest healthcare building project in Western Canada, a \$500 million project planned to house inter-professional teaching and out-patient services covering many

specialties currently available through the University of Alberta and Stollery Children's Hospitals.

Edmonton also boasts the popular title of Canada's Festival City, and was deemed in 2007 to be the 'Cultural Capital of Canada.' With over 30 annual festivals celebrating music, food, culture, sports, theatre and more, there's never a dearth of cultural activities to enjoy. This is in addition to a variety of world-class galleries and museums, performances at the outstanding concert and performance venues, or dining at any of the many restaurants representing every major culinary niche in the world. There's something for everyone in Edmonton!

Employment

Edmonton unemployment rate (October 2007) 4.2%

Main language spoken in homes

English: 88.9%, French: 2.2%, Other: 8.9%

Largest minority language groups

Chinese, Ukrainian, German, Polish, Spanish, Vietnamese, Punjabi, Italian, Tagalog, Arabic

Aboriginal population

38,246 (4% of the urban population)

Family and housing

Avg monthly rent for a two-bedroom (2003) \$722

Avg residential house price (November 2007) \$355,622

Climate

Avg January temperature (°C) -13

Avg July temperature (°C) 16

Avg annual "snow" (cm) 124

Avg annual "rain" (mm) 366

UNIVERSITY OF BRITISH COLUMBIA

2075 Wesbrook Mall, Vancouver, BC V6T 1Z1

Tel: (604) 822-2211

The University

The University of British Columbia is situated in one of the most spectacular natural settings in North America on the western-most tip of Vancouver. UBC has a new downtown campus located at Robson Square and is a member of the Great Northern Way consortium, a new downtown site for high-tech research and development. Its strong academic and research programs, high-quality faculty, diverse student body, and proximity to the Pacific Rim combine to make UBC one of Canada's finest universities. UBC is a broadly based comprehensive university. Teaching and research are conducted in 12 faculties and all disciplines, with a wide range of professional programs including a highly regarded medical school. The university's outstanding faculty is recognized with many national and international research and teaching awards and prizes, including the 1993 Nobel Prize for Chemistry awarded to the late Michael Smith. More than 150 UBC faculty are fellows of the Royal Society of Canada. UBC researchers are members of 18 of the 19 networks in the federal government's Networks of Centres of Excellence program, and one network is headquartered at UBC. The university library has 21 branches and service divisions, including three that serve off-campus, affiliated teaching hospitals and one at Robson Square.

UBC's athletics and recreation department offers a wide range of recreational sport and fitness opportunities to more than 37,000 students annually and also administers one of Canada's most successful interuniversity athletic programs.

About Vancouver: Facts and Figures

Vancouver is the largest metropolitan area in Western Canada and the third largest in the country. It lies sandwiched between the Rocky Mountains and the Pacific Ocean. Vancouver is Canada's gateway to the Pacific Rim and its harbour, the busiest on the west coast of North America, which handles nearly all of Canada's trade with Asia. The beautiful slopes of Whistler are within driving distance. The economy has exhibited strong growth as the region undertakes several major construction projects (including a new RAV line) and preparation for the Olympics in 2010.

Employment

Vancouver unemployment rate (2006): 4.8%; national average: 6.4%

Main language spoken in homes

English: 78%, French: 0.4%, Other: 21.6%

Largest minority language groups

Chinese, South Asian, Filipino, Korean, Southeast Asian, Japanese

Aboriginal population

36,855 (1.8% of the urban population as of 2001)

Family and housing

Avg monthly rent for a two-bedroom (2006) \$1,273

Avg residential house price (2006) \$518,176

Climate

Avg January temperature (°C) 3

Avg July temperature (°C) 17

Avg annual "snow" (cm) 51

Avg annual "rain" (mm) 1,117/yr

UNIVERSITY OF CALGARY

2500 University Drive North West, Calgary, AB T2N 1N4

Tel: (403) 220-5110, Fax: (403) 282-7298

The University

The University of Calgary is a dynamic research and teaching university of growing national and international stature, with 16 faculties and 53 academic departments and major program areas. The U of C offers programs leading to undergraduate, graduate, doctoral, and professional degrees in a number of traditional and interdisciplinary fields. With external research funding of \$172 million, the University of Calgary is recognized worldwide as a leading research university. The university houses many research institutes, centres, and groups investigating a wide variety of topics such as human behaviour, institutions and cultures, energy and the environment, technologies and information, and health and wellness. Virtually all faculty members engage in research, scholarship, and creative activity. The 213-hectare university campus is designed for pedestrians, with extensive lawns, flower beds, and walkways. Parking lots have been restricted to the periphery and visually shielded as much as possible. The main campus features more than 20 academic buildings — all interconnected by enclosed walkways — as well as a modern students' union building, a museum and art gallery,

two performance theatres and a performing arts centre, a child-care centre, and residences for single students and students with families. The University of Calgary's athletic facilities include one of only two covered speed-skating ovals in North America, two hockey rinks, tennis courts, a triple gymnasium, the city's largest racquet centre, an Olympic-size swimming pool, weight rooms, jogging tracks, and a massive indoor climbing wall.

About Calgary: Facts and Figures

Calgary is a large multicultural city filled with diversity. There are many attractions in Calgary that you can visit, such as the Calgary Zoo, Heritage Park, Fort Calgary, and the Glenbow Museum. Stephen Avenue and 17th Avenue provides many different stores for shopping, as well as Calgary's night life. Also the Calgary Stampede occurs every July, showing off Alberta's legendary hospitality. It lies in southern Alberta close to the Rocky Mountains. As such, there are many outdoor activities available like skiing, hiking, rock climbing, camping, mountain biking, and river rafting. Calgary offers something for everyone. The city is booming right now and has opportunities available for everyone.

Employment

Calgary unemployment rate (June 2001): 4.5%

Main language spoken in homes

English: 89.8%, French: 0.4%, Other: 9.8%

Largest minority language groups

Chinese, Vietnamese, Punjabi, Polish, Spanish, Tagalog, Arabic, Italian, German

Aboriginal population

15,195 (1.9% of the urban population)

Family and housing

Avg rental price (2006) \$960

Avg house price (2007) \$430,000

Climate

Avg January temperature (°C) -9

Avg July temperature (°C) 16

Avg annual "snow" (cm) 127

Avg annual "rain" (mm) 321

UNIVERSITY OF MANITOBA

66 Chancellors Circle, Winnipeg, MB R3T 2N2

Tel: (204) 474-8880, Fax: (204) 474-7536

The University

The University of Manitoba offers a diverse range of programs, including a full range of professional programs. It offers Master's and doctoral programs and opportunities for postdoctoral education in many disciplines. The university has special access programs for those who do not have the background required for university entrance, and the continuing education division offers a wide range of professional and certificate programs.

The University of Manitoba is a research-intensive university and is home to 41 research centres and institutes ranging in scope from applied ethics, ageing, cell biology, and higher education to health policy, earth observation science, and theoretical physics. These centres and institutes provide unique interdisciplinary

educational and training opportunities and are a valuable resource for the community at large. An industry liaison office facilitates the commercialization of university research and links the research expertise of the university with business and industry, as well as with government agencies and other universities.

The main campus is in the Winnipeg suburb of Fort Garry, about 12 kilometres from the city centre, and the medical/dental campus is located in central Winnipeg adjacent to the Health Sciences Centre, the province's largest tertiary care complex. Clinical research and medical teaching are concentrated at this hospital and the St. Boniface General Hospital.

About Winnipeg: Facts and Figures

Winnipeg lies near the eastern border of Canada's vast prairies at the confluence of the Red and Assiniboine rivers. Winnipeg is a multicultural city with a diversity of employment and cultural activities. There are a number of theatre groups, a world-class ballet company, a symphony orchestra, an opera, and an active artistic base.

Employment

Winnipeg unemployment rate (November 1998): 5.5%

Main language spoken in homes

English: 89.9%, French: 2.1%, Other: 8.0%

Largest minority language groups

Tagalog, Chinese, German, Polish, Portuguese, Punjabi, Ukrainian

Aboriginal population

45,750 (6.9% of the urban population)

Family and housing

Avg monthly rent for a two-bedroom (2003) \$645

Avg residential house price (2003) \$107,200

Climate

Avg January temperature (°C) -17

Avg July temperature (°C) 20

Avg annual "snow" (cm) 111

Avg annual "rain" (mm) 41

UNIVERSITY OF OTTAWA

550 Cumberland St., Ottawa, ON K1N 6N5

Tel: (613) 562-5800

The University

Located in the heart of the national capital, at the juncture of French and English Canada, the University of Ottawa holds a unique place on the academic map of Canada. The university distinguishes itself through its special mandate to promote bilingualism and French culture in Ontario. On campus, in what amounts to a small city within a city, more than 25,000 students from a variety of heritages study, live, and work side by side in surroundings that foster the English and French cultures. The university's nine faculties — arts, education, engineering, health sciences, law, management, medicine, science, and social sciences — offer nearly 140 undergraduate majors and concentrations. Under the aegis of the faculty of graduate and postdoctoral studies, they also offer graduate programs leading to Master's and doctoral degrees in most of those disciplines. In addition, the University of Ottawa offers an extensive array of co-op programs. Culturally, the departments of music, theatre,

and visual arts provide a full program of concerts, plays, and exhibitions. Festivals, fairs, films, and public lectures of every description — many with an international flavour — as well as a broad spectrum of interuniversity, intramural, and recreational sports make the campus a lively and vibrant place.

About Ottawa: Facts and Figures

Ottawa has been described as one of the most beautiful capitals in the world. Located on the banks of the Ottawa River and Rideau Canal, Ottawa enjoys the attributes of a major centre while maintaining the accessibility, atmosphere and charm of a smaller city. With more than 29 museums, including 12 national institutions, there is a wealth of exhibitions, galleries, and historical monuments. The National Art Gallery of Canada holds impressive collections of art ranging from Canadian to Asian to Contemporary Art. At the Canadian Museum of Civilization, Canada's largest and most popular cultural institution, you can explore the achievements of Canada's aboriginal peoples and journey through 1,000 years of history.

Located in Ottawa's downtown, a couple of blocks away from Parliament Hill, the ByWard market is one of Canada's oldest and largest public markets. Within an area of four square blocks, you'll find cafés, specialty food shops, fine dining, boutiques, galleries, and pubs.

Access to National Parks and wilderness areas are also located within and around the city. Just across the river from Parliament Hill is Gatineau Park, a recreational playground for outdoor enthusiasts. Endowed with hundreds of kilometres of trails and numerous crystal-clear lakes, the Park is a superb place for hiking, biking and cross-country skiing. As the largest skating rink in the world, The Rideau Canal Skateway offers a unique winter experience for all. After a nighttime skate you can find specialty food shops along the canal and relax with Ottawa's famous Beaver Tails.

With over 60 festivals and events taking place in Canada's Capital Region each year, Ottawa is truly a festive city. Each summer, The Ottawa International Chamber Music Festival features the very best musicians from across Canada and around the world in acoustically perfect heritage churches. As the largest chamber music festival in the world, it is one of Canada's most important cultural events. During May, you can tiptoe through millions of tulips at the Canadian Tulip Festival. Every February, Ottawa hosts Winterlude, North America's greatest winter festival. From spectacular ice carvings to an amazing playground made of snow, Winterlude is a great way to take in the best of our Canadian winter.

Whatever your interest — tasting cuisine from around the world, appraising oil paintings, hiking through the wilderness or watching theatre productions — you'll find plenty of things to do amidst Ottawa's celebrations of food, music and cultural traditions.

Employment

Ottawa unemployment rate (2007) 4.6%

Main language spoken in homes

English: 62%, French: 30.3%, Other: 7.7%

Largest minority language groups

Arabic, Chinese, Somali, Spanish, Italian, Vietnamese

Aboriginal population

11,605 (1.2% of the urban population)

Family and housing

Avg monthly rent for a two-bedroom (2003) \$932

Avg residential house price (2003) \$219,000

Climate

Avg January temperature (°C) -10

Avg July temperature (°C) 21

Avg annual "snow" (cm) 203

Avg annual "rain" (mm) 733

UNIVERSITY OF SASKATCHEWAN

105 Administration Place, Saskatoon, SK S7N 5A2

Tel: (306) 966-4343, Fax: (306) 975-1026

The University

Since it was founded in 1907, the University of Saskatchewan has conferred more than 113,000 degrees. With more than 900 faculty members in 13 colleges, the university offers more than 70 specializations for undergraduate and graduate students, one of the broadest program arrays of any university in Canada. With half of all first- and second-year classes and three-quarters of the third- and fourth-year classes enrolling 25 or fewer students, individual student attention is one of the University of Saskatchewan's most important features. The university is also a Canadian leader in providing support and enhancement programs for Aboriginal students in education, law, commerce, arts and sciences, and engineering. Annual research revenues for University of Saskatchewan faculty exceed \$100 million. The university is also the centre of an active community of federal, provincial, and private research companies. The Canadian Light Source, Canada's only synchrotron radiation facility, which opened in 2004, is internationally known as a leader in research and technology development. The synchrotron has attracted more than 2,000 researchers from around Canada and the world, and will continue to be a magnet for top students in a variety of disciplines, including agriculture, engineering, physics, geology, and medicine for years to come.

About Saskatoon: Facts and Figures

A city since 1903, "Saskatoon" is derived from "mis-sask-quah-toomina," the Cree Indian name for a local indigenous berry. As the province's largest city, Saskatoon offers the amenities of a metropolitan city with the friendliness of a small community. The eco-friendly nature of the city protects the pristine beauty of the South Saskatchewan River, which permeates throughout the city, and is enjoyed by the many bridges that hover over it. Flanked by green parkland, Saskatoon offers many running trails and parks, and is within hours of many national and provincial parks nationally known for hiking, fishing, camping, golfing, and hunting. Home to the University of Saskatchewan, Saskatoon is also the cultural centre of the province, offering trendy shops, art studios, casinos, pubs, and clubs. The city also boasts a Symphony Orchestra, and hosts many live theatre and jazz festival performances throughout the year. The diversity of Saskatoon's population is a great way to experience cuisine from many parts of the world, as the city boasts many restaurants that have earned national acclaim.

Employment

Saskatoon unemployment rate (November 2007) 4.1%

Main language spoken in homes

English: 95.9%, French: 0.4%, Other: 3.7%

Largest minority language groups

Chinese, German, Ukrainian, Vietnamese

Population

233,923 (Statistics Canada 2006)

Family and housing

Avg monthly rent for a two-bedroom (2006) \$750

Avg residential house price (2006) \$200,000

Climate

Saskatoon experiences four distinct seasons with temperatures ranging from 30°C on the warmest summer days to -20°C on the coldest winter days. The average annual precipitation level is 347.2mm.

Avg January temperature (°C) -17

Avg July temperature (°C) 26

Avg annual "snow" (cm) 97

Avg annual "rain" (mm) 347

UNIVERSITY OF TORONTO

27 King's College Circle, Toronto, ON M5S 1A1

Tel: (416) 978-2011

The University

The University of Toronto is an outstanding centre of undergraduate, professional, and graduate education. At U of T, professors of international calibre bring leading research and scholarship to bear on their teaching and provide opportunities for study and discovery at the forefront of the sciences, social sciences, and humanities. Some of the key research development that U of T is responsible for includes the first cloning of T-cells, the first practical electron microscope, and the extraction of insulin. U of T's 40 libraries, among them Canada's largest research library and dozens of specialized facilities in the colleges, faculties, and schools, contain more than 10 million volumes and a plethora of other material. The Thomas Fisher Rare Book Library, one of North America's great collections, attracts scholars from around the world, and it is housed at the largest book repository in Canada, Robarts Library. With more than 2,000 undergraduate courses in the faculty of arts and science alone, as well as 81 fully accredited doctoral programs and hundreds of courses in 14 professional faculties, U of T affords its students an unrivalled education, leading to rewarding careers in a vast array of exciting fields. Our students, among the most talented in Canada, benefit from programs of study abroad, national and international exchanges, cooperative education, and inter-instructional experiences with dozens of affiliated institutions, including a renowned network of teaching hospitals and community-based health units, museums, and art galleries. U of T is world renowned academic institution and is ranked by Newsweek as the best university in Canada and 9th among all public universities in the world.

About Toronto: Facts and Figures

Toronto is the largest city in Canada and is the provincial capital of Ontario. The Greater Toronto Area has a population of over 5.5 million according to the 2006 Census. A city of diversity and multiculturalism, Toronto is the commercial, industrial, and financial centre of Canada. Toronto is known as “a city of opportunity” that attracts visitors and new residents from all corners of the globe. Forty-nine per cent of the Toronto population was born outside of Canada. This city is ranked as one of the world’s most livable cities by the Economist Intelligence Unit due to its high standard of living, clean environment and low crime rates. Downtown Toronto consists of distinct neighbourhoods, which include the Entertainment district, the Fashion district, the Business district, Little Portugal, Little Italy, Little India, Greektown, and three Chinatowns. Toronto is also the home of the world’s longest street, Yonge Street.

Employment

Toronto unemployment rate (June 2001): 6.0%

Main language spoken in homes

English: 75.6%, French: 0.5%, Other: 24%

Largest minority language groups

Chinese, Italian, Portuguese, Spanish, Vietnamese, Greek, Arabic, Korean, Somali, Tamil, Tagalog, Farsi, Urdu, Gujarati, Punjabi

Aboriginal population

16,095 (0.4% of the urban population)

Family and housing

Avg monthly rent for a two-bedroom (2003) \$1,040

Avg residential house price (2003) \$291,000

Climate

Avg January temperature (°C) -4

Avg July temperature (°C) 22

Avg annual “snow” (cm) 133

Avg annual “rain” (mm) 710

UNIVERSITY OF WESTERN ONTARIO

1151 Richmond Street, London, ON N6A 3K7

Tel: (519) 661-2111

The University

London’s University of Western Ontario is one of Canada’s oldest, largest, and most beautiful universities. Together with 3,000 faculty and staff, our students enjoy a diversified academic and social life. In its size, cohesiveness, and diversity, Western boasts many of the best features of both a small town and a cosmopolitan city. Like much smaller universities, Western has an excellent faculty-to-student ratio of 1:18. There are larger lecture classes, but the average first-year class size is 80, few are more than 150, and senior classes are substantially smaller. In addition, at Western, lectures are complemented by labs and tutorials of about 30 students. It is Western’s way of assuring that dialogue and an interactive learning environment are as much a part of the academic experience as the lectures.

About London: Facts and Figures

London is a diverse city, which boasts a population of 350,000 and is growing. It offers a wide variety of restaurants, including great Middle Eastern, Japanese, Thai, Vietnamese and Fine dining. London is also known for its lively afterlife with dozens of bars and clubs frequented by both undergraduate and professional students. In the summer and spring you can enjoy London’s beautiful parks and trails and understand why it is referred to as the “Forest City.”

One great benefit of living in London is getting the advantages of a big city but still getting that hometown feel.

Employment

London unemployment rate (June 2001): 6.3%

Main language spoken in homes

English: 92.3%, French: 0.3%, Other: 7.3%

Largest minority language groups

Polish, Portuguese, Spanish, Arabic, Chinese, Italian

Aboriginal population

4,385 (1.1% of the urban population)

Family and housing

Avg monthly rent for a two-bedroom (2003) \$736

Avg residential house price (2003) \$155,000

Climate

Avg January temperature (°C) -6

Avg July temperature (°C) 20

Avg annual “snow” (cm) 213

Avg annual “rain” (mm) 781

The following information was collected in July 2010.

The following information has been abridged from material from the Professional Association of Interns and Residents of Newfoundland. For further information, see <http://www.med.mun.ca/pairn>.

Newfoundland and Labrador

Gross annual PGY-1 salary	\$42,781	Gross annual PGY-2 salary	\$46,854
Gross annual PGY-3 salary	\$50,924	Gross annual PGY-4 salary	\$55,001
Gross annual PGY-5 salary	\$59,073	Gross annual PGY-6 salary	\$63,150
Conference leave	7 days/pd	Annual vacation	4 weeks/year *
Meal allowance	\$105/month	Frequency of call	Excess in-house call > 7/28 weekday \$225, weekend \$360 Home Call > 7/21, \$75 per call \$30 each regular schedule on-call duty period; \$75 each additional on-call period
Maternity/Paternity leave	Up to One year	Provincial health insurance	Contact Provincial Resident Association directly
Provincial dues (% of salary)	1%	Extended health insurance	Yes, mandatory-employee pays 50%
CMPA dues	100% Reimbursement	Dental plan	Optional-employee pays 100%
Statutory holidays	1-1/2 x pay or paid day off	Long-term disability insurance	Group paid by employee -non taxable
Life insurance	Yes, mandatory-employee pays 50%	Sick leave	Yes, 1 day/month
Parking Charges	\$5.00 per annum	LMCC	Cost of examination reimbursed upon successful completion
Resident Student	Full time status		

www.pairn.nl.ca

* NOTICE regarding PGY1 VACATION included in Memorial's Program Descriptions:

For Memorial's PGY1 programs VACATION will not be assigned as one four-week block, as presently indicated under Memorial's program descriptions. Instead, VACATION (i.e. total of 4 weeks) will be available during the PGY1 for the convenience of the resident as follows (certain conditions/restrictions will apply):

i) 1 two-week block plus 2 one-week blocks OR ii) 4 one-week blocks (Note: One week vacation consists of five (5) work days + weekend)

To compensate for this change, PGY1 programs (as presently described) will be modified to include another academic rotation (four weeks) in accordance with training requirements for the respective program. Further information to be available shortly and/or at time of interviews.

Maritime Provinces

PGY-1 salary	\$50,045	Gross annual PGY-2 salary	\$57,520
Gross annual PGY-3 salary	\$61,483	Gross annual PGY-4 salary	\$65,610
Gross annual PGY-5 salary	\$70,082	Gross annual PGY-6 salary	\$74,867
Gross annual PGY-7 salary	\$78,262	Gross annual PGY-8 salary	\$83,740
Educational leave	Yes	Annual vacation	4 weeks
Call stipend	Yes	Frequency of call	1 in 4 in-hospital and for home call
Maternity leave after one year's service	17 weeks with top-up (up to a year total)	Provincial health insurance	Yes
Provincial dues (% of salary)	1.3%	Extended health insurance	Yes
CMPA dues paid	Yes	Dental coverage	Yes
Statutory and floating holidays	Paid	Long-term disability insurance	66-2/3 salary up to age 65
Life insurance	\$100,000 of insurance	Sick leave	Yes

Visit the PARI-MP website: <http://www.parimp.ca/>

Quebec

Gross annual Resident 1 Salary*	\$41,355	Gross annual Resident 2 Salary	\$45,382
Gross annual Resident 3 Salary	\$50,045	Gross annual Resident 4 Salary	\$54,685
Gross annual Resident 5 Salary	\$58,397	Gross annual Resident 6 Salary	\$61,329
Gross annual Resident 7 Salary	\$64,398	Prime de garde:	\$212/28 day
Resident Coordinator	\$503/month	Assistant Resident Coordinator	\$366/month
Annual vacation	4 weeks	Statutory and floating holidays	13/year
Conference leave	10 days pd/year	Study leave	7 days pd/year
Exam leave	Day (s) of the exam	Wedding leave	7 days
Resuscitation courses and exam leave	Day of the course and of the exam , course paid	Leave for death in family	From 1 to 5 days depending on the family member
Sick leave	9.6 days pd/year And reimbursement of days not taken	Leave of absence without pay (exceptional measure)	12 months maximum
Maternity leave Provincial Program (RQAP**) and FMRQ***	21 weeks 95% of salary	Paternity leave Provincial Program (RQAP) and FMRQ	1 week, 100% of salary 3 to 5 weeks 95% of salary (two options)
Parental leave (time sharing between parents)	25 to 32 weeks 55 to 75% of salary	Adoption leave	28 to 37 weeks 55 to 75% of salary
Stationnement	½ of doctors' fee Free during on-call duty	Téléavertisseur	Provided by the establishment
Quebec Health Insurance Program / RAMQ****	Yes	Extended Health Insurance	Yes
Dental Plan	Yes, for McGill only	Professional Liability Insurance (CPMA not applicable)	Yes (free)
Long-Term disability insurance	Yes Until 65 years old	Meals	Reduced fee Free during on-call duty
Life insurance	Yes	Superior Financial Programs	Yes

FOR MORE INFORMATION, CONSULT OUR THE FMRQ WEB SITE AT THE FOLLOWING ADDRESS : www.fmrq.qc.ca

*The Fédération des médecins résidents du Québec' collective was imposed by law until March 31, 2010. An annual 2 % raise is to be added for years 2007-2008 and 2009.

**RQAP : Régime québécois d'assurance parentale (Maternity, Paternity, Parental and Adoption Leave Provincial Plan)

***FMRQ : Fédération des médecins résidents du Québec (Québec medical residents' union)

****RAMQ : Régie de l'assurance maladie du Québec (Québec Health Insurance Plan)

*****In Québec, professional liability insurance is entirely assumed by l'Association québécoise des établissements de santé et de services sociaux (AQESSS) – Québec's hospital association, as detailed in the FMRQ's collective agreement. Medical Residents have no fees to disburse and need not take additional insurance with CPMA.

Ontario

Gross annual PGY-1 Salary	\$51,065	Gross annual PGY-2 Salary	\$59,608
Gross annual PGY-3 Salary	\$63,230	Gross annual PGY-4 Salary	\$67,512
Gross annual PGY-5 Salary	\$71,995	Gross annual PGY-6 Salary	\$76,210
Gross annual PGY-7 Salary	\$79,220	Gross annual PGY-8 Salary	\$83,704
Educational leave	7 days/year Additional time off for writing any CND or US certification exams.	Annual vacation	4 weeks
Meal allowance	No	Frequency of call	1 in 4 In-hospital, 1 in 3 home
Pregnancy leave	17 weeks	Provincial health insurance	Yes
Parental leave	35 weeks 37 weeks if resident did not take pregnancy leave.	Extended health insurance	Yes
Provincial dues (% of salary)	1.4%	Dental plan	85% paid for eligible expenses
CPMA dues paid	Up to 80% reimbursed by Ministry of Health and Long Term Care	Long-term disability insurance	Yes - 70% of salary
Statutory and floating holidays	10 stat days plus 1 personal floater. 5 additional days off over Xmas/New Years Period	Life insurance	Yes. 2 x salary
Sick leave	6 months or until end of appointment (whichever occurs first)		
Call Stipend	\$105 in-hospital; \$52.50 home call		

Visit the PAIRO website: <http://www.pairo.org/>

Manitoba

Gross annual PGY-1 Salary	\$51,285*	Gross annual PGY-2 Salary	\$57,488
Gross annual PGY-3 Salary	\$61,665	Gross annual PGY-4 Salary	\$66,409
Gross annual PGY-5 Salary	\$71,153	Gross annual PGY-6 Salary	\$75,898
Gross annual PGY-7 Salary	\$80,548	Gross annual PGY-8 Salary	\$86,838
Education leave	Yes	Annual vacation	4 weeks
Call Stipend	\$105.00 in-hospital weekday \$120.00 weekend Home call \$52.50 weekday and \$60.00 weekend	Frequency of call	1 in 4**
Maternity leave	26 weeks max	Provincial health insurance	Yes
Provincial dues (% of salary)	1% of salary	Extended health insurance	Available
CMPA dues paid	Partial	Dental plan	\$3.99/month
Statutory and floating holidays	Paid days	Long-term disability insurance	\$2500 to \$3500 per month mandatory, employee pays, non taxable
Life insurance	\$120,000 mandatory, employee pays	Sick leave	30 days/year

*Effective July 1, 2010.

** 1:4 call averaged over 4 week period. Exception: 1:4 for vascular, MICU, SICU, general surgery, orthopedics, neurosurgery (all call over 1:4 is paid). 1:3 weekend off.

Saskatchewan

Gross annual PGY-1 Salary	\$47,117*	Gross annual PGY-2 Salary	\$51,385*
Gross annual PGY-3 Salary	\$55,649*	Gross annual PGY-4 Salary	\$59,894*
Gross annual PGY-5 Salary	\$64,108*	Gross annual PGY-6 Salary	\$68,312*
Education leave	7 days with pay	Annual vacation	4 weeks
Meal allowance	Yes, when on in-house call. Eliminated effective January 1, 2008.	Frequency of call	1:4 in-house; 1:3 out-of-house
Maternity leave / Paternity	In conformity with Sask. Labour Standards Act - 18 weeks max maternity leave and up to 34 weeks parental leave. 5 paid days paternity	Provincial health insurance	Yes, if registered with Sask. Health
Supplemental Maternity Leave Benefits	15 weeks when eligible for Employment Insurance	Extended health insurance	Blue Cross family coverage, if registered with a Provincial Health Plan
CMPA dues paid	100%	Dental plan	100% (6 mo waiting period)
Statutory and floating holidays	1/2 pay & day off, or 1-1/2 x pay, plus 6 days at Christmas	Long-term disability insurance	Paid premium cost for Basic Disability Insurance
Life insurance	Pay maximum of \$67.50 per year towards cost of first \$70,000 coverage (voluntary plan)	Sick leave	1-1/4 days per month to maximum 75 days
Provincial dues (% of salary)	1%	Employee Assistance Program	
On-Call Stipends	Effective Oct. 1, 2006: \$60 for in-house \$30 for home call Effective January 1, 2008: \$100 for in-house \$50 for home call No conversion from home call to in-house call.		

*As at January 1, 2007.

Term of Collective Agreement - January 1, 2006 to December 31, 2008 - visit http://www.usask.ca/hrd/docs/pairs_ca_2005-2008.pdf for contract details/conditions.

Alberta

Gross annual PGY-1 Salary	\$54,857	Gross annual PGY-2 Salary	\$60,828
Gross annual PGY-3 Salary	\$65,592	Gross annual PGY-4 Salary	\$70,360
Gross annual PGY-5 Salary	\$76,325	Gross annual PGY-6 Salary	\$81,093
Gross annual PGY-7 Salary	\$87,694	Gross annual PGY-8 Salary	\$94,835
Educational leave	5 days paid leave	Annual vacation	4 weeks/yr
Call Stipends	weekday in-house - \$117.56 weekend in-house / holiday - \$178.02 weekday home call - \$58.78 weekend home call / holiday - \$89.01	Frequency of calls	In-house call: 7/28. 2/4 weekend call. Home call: 9/28. 2/4 weekend call **A Resident scheduled on Home call but who is required to work more than four hours in hospital during the call period, of which more than one full hour is past 12:00 a.m. and before 6:00 a.m., shall be remunerated at the rate for In-House call. \$100 per day for each scheduled weekend day of patient rounds when not on-call
Practice Stipend	\$2,000	Provincial health insurance	75% premium paid
Provincial dues (% of salary)	.95%	Extended health insurance	75% premium paid \$500 per year Health Spending Account*
CMPA dues paid	No. Required & tax deductible	Dental plan	75% premium paid
Life Support Course Costs (program approved)	100% paid	Long-term disability insurance	100% paid for 2/3 gross income
Statutory holidays	Paid days. Additional days off are given if resident works the day before and part of a named holiday.	Parental Leave	2 weeks leave with full pay and benefits; 52 weeks (inclusive of Maternity/Paternity/Adoption Leaves) – unpaid leave
Sick leave	Up to 3 months or to end contract paid leave, whichever occurs first	Maternity Leave	18 weeks total (17 weeks paid to match 90% of salary when combined with EI)
Life insurance	100% towards \$100,000 coverage		

*Terms of Agreement July 1, 2010 – June 30, 2013 - <http://www.para-ab.ca/agreement>

British Columbia

Gross annual PGY-1 Salary	\$48,565.20	Gross annual PGY-2 Salary	\$54,177.71
Gross annual PGY-3 Salary	\$59,038.36	Gross annual PGY-4 Salary	\$63,549.53
Gross annual PGY-5 Salary	\$68,642.43	Gross annual PGY-6 Salary	\$72,965.18
Gross annual PGY-7 Salary	\$77,758.74	Educational leave	Yes
Annual vacation	4 weeks	Meal allowance	\$12.69/day
Frequency of calls	1 in 4 onsite/1 in 3 offsite	Maternity leave	17 weeks, plus 35 weeks Parental Leave
Provincial health insurance	100%	Provincial dues (% of salary)	1.65%
Extended health insurance	100%	CMPA dues paid	Yes**
Dental plan	100%	Statutory holidays	2 x pay plus extra day with pay
Long-term disability insurance	100%	Sick leave	Yes
Life insurance	100% toward \$50,000		

*effective April 1, 2009.

** only if required by hospital. Hospitals provide liability insurance.

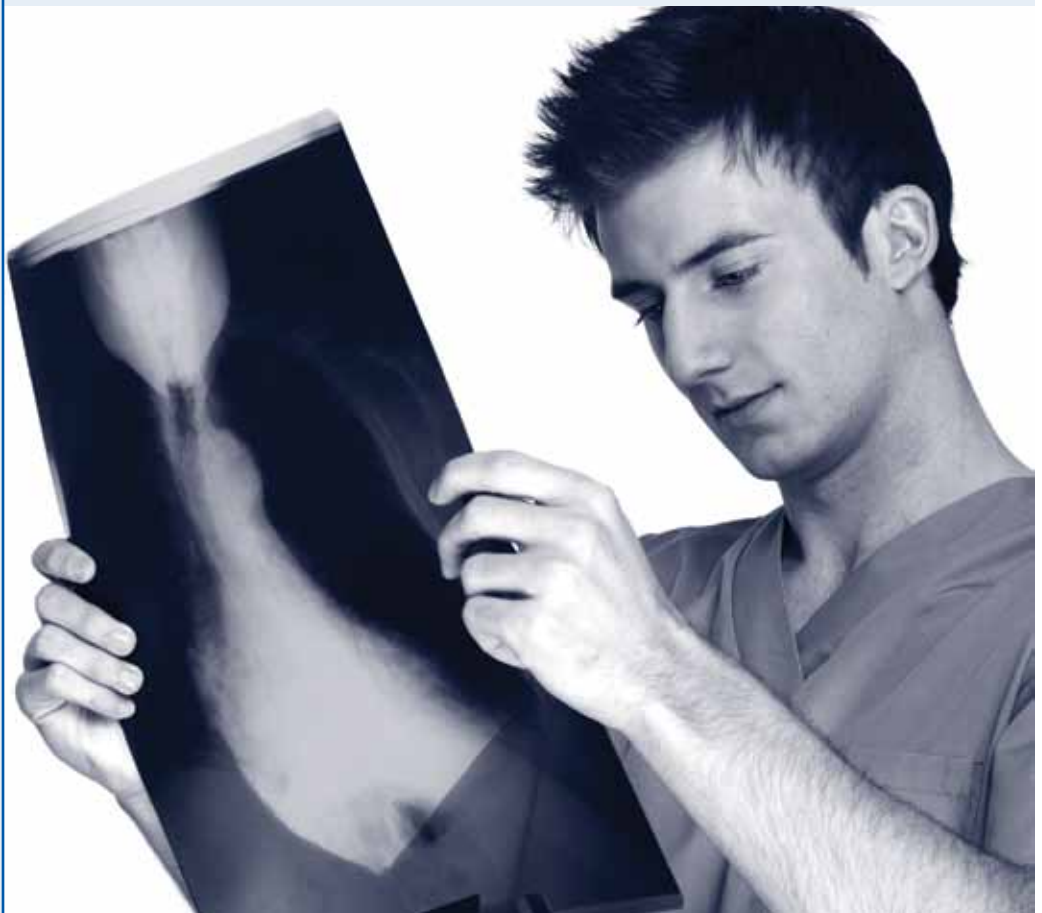
Membership in the Professional Association of Residents of BC. (PAR-BC) is mandatory Visit <http://www.par-bc.org>.

Section F

PROGRAM DIRECTORS SURVEY

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This chapter is a summary of a survey that was sent to the Program Directors in Toronto. The majority of the questions focused on what the directors were looking for and what they deemed important and unimportant.



Background

Career selection has long been a source of stress and anxiety for medical students. In addition to worrying about which specialty to apply to, many medical students also believe that their specialty choice is final once they have been matched to a given specialty and program. As a result, students feel they need to select a career specialty early in their medical training and invest heavily in the pursuit of that specialty. Hence, performing numerous electives, volunteering for research projects, and job “shadowing” to get more exposure to a specialty and its members have become a critical aspect of medical student life. However, students’ heavy time investment in one specialty may come at the expense of exploring alternative career selections and improving their candidacy in these, if even as second choices.

Certainly, one source of student anxiety derives from a lack of evidence in directing career selection. As a result, medical students are unclear about what qualities and experiences are most important for their acceptance to the programs of their choice. Certainly this has been the case when all of us were in your position. One seemingly authoritative mentor would offer career advice but it would sometimes conflict with another mentor’s advice — who do you believe?

Due to the lack of current, reliable, and relevant information, we set out to survey Program Directors from all Canadian medical schools about how various aspects of an applicant’s candidacy would rate for their programs. In order to ensure its relevancy to medical students and improve our confidence in the results, we first developed a questionnaire observing the principles of measurement theory. This questionnaire was then piloted with the Program Directors at the University of Toronto, which embodies the largest and most diverse group of Program Directors at any Canadian medical school.

A Word About Study Methodology

To reassure you that this information is reliable, we would like to outline the steps taken to ensure the highest quality evidence for you to use in your decision-making. The basis for our recommendations are the results of a questionnaire that was developed and tested in three stages, observing the principles of measurement theory. This will be discussed below under the terms “Item Generation,” “Item Reduction,” and “Questionnaire Testing.” Members of the Medical Services Committee (MSC) oversaw the development and testing of the questionnaire, and the Postgraduate Medical Education Committee at the University of Toronto approved this survey of its Program Directors. All respondents were students or faculty members of the Faculty of Medicine. The survey was administered in 2000. Although the data is out of date and only samples the University of Toronto, we feel that it is still valuable in capturing perceptions of the Program Directors. Please be careful in generalizing the findings to other schools.

Step 1 – Item Generation

Content experts and medical students generated items that were felt to influence a candidate’s application to a residency program. These included aspects that may have had a positive or negative impact on the application. In addition, items were added that described the lack of attribute or accomplishment to determine what effect this had on an applicant’s candidacy.

Step 2 – Item Reduction

The 72 items were formatted into a survey structure by linking them to a seven-point Likert-type scale (A – seriously threatens entire application, B – strongly negative impact for section, C – negative impact for section, D – no impact on section, E – positive impact for section, F – strongly positive impact for section, G – virtually assures position in program). The initial questionnaire was piloted among four University of Toronto Program Directors for clarity and comprehensiveness of the items. Respondents were invited to add additional items. Minor wording changes were suggested for a few of the items, and subsequently adopted.

Some of the Program Directors felt the survey was too long and would limit the response rate of future respondents. In order to remove the least important items from the pool, 16 third-year, volunteer University of Toronto medical students were given the 72-item questionnaire and each asked to rate which 10 items were the most important and which 10 items were the least important. An item was given a score of -1 if it were rated least important and +1 if it were rated most important. Any item with a cumulative score of less than or equal to -4 following analysis of the surveys was removed. Through this item reduction process, 20 items were removed, leaving a survey of 52 questions.

Step 3 – Questionnaire Testing

The 52-item questionnaire was circulated to all Program Directors (n=64) at the University of Toronto. Items were anchored by the seven-point Likert scale described above, in addition to a response category indicating that the item was not clearly worded. The number of respondents who rated each item were counted and simple proportions calculated. Program Directors were not asked to identify themselves on the questionnaire. Global consent was obtained from the Postgraduate Medical Education Committee prior to questionnaire distribution. Individual written consent was implied by the return of a completed survey.

WHAT WE FOUND

Forty-six (72%) of the Program Directors returned the questionnaire by mail. No follow-up reminders were sent. The clarity of all items was greater than 94%. The results are reported in the following section under the seven domains of importance generated by medical students like you. The full numerical results are reported in the tables.

F-2

ELECTIVES STATISTICS

Completing an elective in the specialty to which the candidate is applying is very important. The majority of responding Program Directors (74.5%) felt that an application would be negatively affected if the student did not complete a formal elective in the specialty to which they were applying (by formal, we mean more than two weeks in length). Doing an elective at the centre at which you plan to apply to and doing well during that rotation was viewed favourably by 97.7% of Program Directors, but you only have so many electives, so how do you choose? Do you put all of your eggs in one basket by doing electives in your first choice of specialty, at the expense of other specialties?

First of all, doing multiple electives (at other centres) does not help you that much for the centres where you didn't do the electives — and it didn't hurt you much, either. Only 14% of programs felt this would undermine your chances. One solution? If you are able to rotate with a well-recognized name in the specialty, generally a strong letter of support from that individual will carry a lot of weight (see the next section for more details).

However, if you decide to do an elective in which you hope to be considered for a residency position, be prepared to put in a strong effort. Sixty-five percent of Program Directors felt that negative feedback from an elective at the site to which the applicant was applying would have a strongly negative impact on the candidate's application or threaten the entire application.

Electives Table

Question	Threatens Entire Application (%)	Strongly Negative Impact (%)	Negative Impact (%)	No Impact (%)	Positive Impact (%)	Strongly Positive Impact (%)	Virtually Assures Position (%)
No electives in specialty	16.3	23.3	34.9	23.3	2.3	0	0
Single elective 2–4 weeks in specialty	0	0	11.6	16.3	67.4	4.7	0
Single elective >4 weeks	0	0	2.3	9.3	58.1	30.2	0
Electives with recognized names in specialty	0	0	0	4.7	55.8	34.9	2.3
Elective at your centre with poor feedback	25.6	39.5	32.6	2.3	0	0	0
Elective at your centre with good feedback	0	0	0	2.3	18.6	72.1	7.0
Did not perform elective at your centre	0	2.3	11.6	72.1	14.0	0	0

Reference: Wagoner N. and Suriano R., 1999.

F-3

REFERENCE LETTERS STATISTICS

Specialty-specific reference letters are also important. Ninety-five percent of responding Program Directors felt that having a letter from a Clinician in the specialty would positively affect the application, and 65.1% of Program Directors felt that the absence of a letter by a Clinician in the specialty would negatively affect the application. An excellent letter from a referee who is renowned in the field has a strongly positive effect on the

application. Letters from outside the specialty can complement your application and do not have a negative effect. For example, if you are applying to Ophthalmology and your supervisor in General Surgery felt that you had really strong surgical skills, or if applying to Radiation Oncology and your Family Medicine supervisor felt that you have very high interpersonal skills, this may also help your application.

Reference Letters Table

Question	Threatens Entire Application (%)	Strongly Negative Impact (%)	Negative Impact (%)	No Impact (%)	Positive Impact (%)	Strongly Positive Impact (%)	Virtually Assures Position (%)
Has reference letter from a Clinician*	0	0	0	2.3	74.4	20.9	0
No reference letter from Clinician*	9.3	11.6	44.2	34.9	0	0	0
Multiple references from Clinicians*	0	0	0	0	53.5	44.2	2.3
Excellent letter from a recognized name*	0	0	0	0	7.0	90.7	2.3
Good letter from a recognized name*	0	0	2.3	0	83.7	14.0	0
Letter of reference from a Clinician outside*	0	0	0	51.2	41.9	0	0
Maximum letters you would accept	3 letters 21.4%	4 letters 38.1%	5+ letters 40.5%				

*in the specialty

F-4

RESEARCH STATISTICS

Just under half (47.5%) of the respondents felt that having no clinical or basic science research would harm one's application (keep in mind this is a survey from University of Toronto Program Directors and may not be as high in other less academically focused universities). Experience in clinical or basic science research had a positive impact in almost all surveyed programs. A publication in a respected journal had a positive impact on the application according to almost

all respondents (97.5%), with 45% feeling this would have a strongly positive impact. Multiple publications do not seem to have a greater impact than publishing one, so don't attempt to publish your third article at the expense of other aspects of your application where you are not as strong. Formal research training in the form of an M.Sc. or a Ph.D. was felt to have a positive impact with 87.5% of respondents.

Research Table

Question	Threatens Entire Application (%)	Strongly Negative Impact (%)	Negative Impact (%)	No Impact (%)	Positive Impact (%)	Strongly Positive Impact (%)	Virtually Assures Position (%)
Did basic science research that is applicable to the specialty	0	0	0	2.5	42.5	52.5	2.5
Did unrelated basic science research	0	0	12.5	75.0	12.5	0	0
Did clinical research applicable to the specialty	0	0	0	0	42.5	57.5	0
Did unrelated clinical research	0	0	5.0	80.0	15.0	0	0
Did no clinical or basic science research	5.0	42.5	47.5	5.0	0	0	0
Has paper published in any journal	0	0	15.4	76.9	5.1	2.6	0
Has paper published in a respected journal	0	0	2.5	52.5	42.5	2.5	0
Has more than one paper published in any journal	0	0	0	2.6	6.2	46.2	5.1
Has formal research training (M.Sc., Ph.D.)	0	0	0	12.5	35.0	42.0	10.0

F-5

APPLICANT INFORMATION STATISTICS

Perhaps a little more mundane, but still helpful in your application, is a well-presented personal letter, as is a well-organized CV. A small percentage of the Program Directors (10%) felt that personal anecdotes have a negative impact. Dean's

letters are also important but perhaps not as much as referee letters. However, a below-average Dean's letter/report would still negatively reflect on your application according to the vast majority of respondents (90%).

Application Information Table

Question	Threatens Entire Application (%)	Strongly Negative Impact (%)	Negative Impact (%)	No Impact (%)	Positive Impact (%)	Strongly Positive Impact (%)	Virtually Assures Position (%)
Personal letter flows logically	0	0	0	16.7	66.7	14.3	0
Personal letter addresses criteria in CaRMS handbook	0	0	2.3	38.1	45.2	7.1	0
Personal letter includes personal anecdotes	0	2.5	7.5	60.0	22.5	5.0	0
CV is well organized	0	0	0	14.3	69.0	14.0	2.3
CV contains personal interests	0	0	2.4	40.5	47.6	9.5	0
Has an exemplary Dean's letter or report	0	0	0	15.0	67.5	17.5	0
Has an average Dean's letter or report	0	0	17.4	75.0	5.0	0	0
Has a below average Dean's letter or report	25.0	27.5	37.5	10.0	0	0	0

F-6

PERSONAL ATTRIBUTES STATISTICS

An important trend that we noticed from surveying these Program Directors is the importance of a well-balanced application. A majority (67-1/2%) of the respondents felt that if your application does not seem well rounded, this would have a negative impact. Medical school is full of life-changing opportunities — don't be afraid to participate in a club or group

to enrich your experiences. Ultimately it will make you a better person and a better doctor. As icing on the cake, it may also help you in your application for residency; leadership experience in one of these groups was felt to positively affect an application by almost all surveyed.

Personal Attributes Table

Question	Threatens Entire Application (%)	Strongly Negative Impact (%)	Negative Impact (%)	No Impact (%)	Positive Impact (%)	Strongly Positive Impact (%)	Virtually Assures Position (%)
Did not seem well rounded	0	12.5	55.0	32.5	0	0	0
Seemed interested in things other than medicine	0	0	0	25.0	67.5	7.5	0
Enjoys sports	0	0	0	72.5	22.5	5.0	0
Participated in volunteer groups	0	0	0	47.5	50.0	2.5	0
Had experience in leadership roles	0	0	0	7.5	75.0	17.5	0
Did not participate in group activities	0	10.0	22.0	65.0	2.5	0	0

F-7

INTERVIEW STATISTICS

For candidates who appear comfortable answering questions and who developed good rapport during the interview, more than 90% of respondents felt this would have a positive impact. Only 13% of respondents felt that a nervous-appearing candidate would have a negative effect, so don't worry that your nervousness will undermine your application. Just try to be yourself. Those appearing insincere were deemed highly undesirable — 95% of Program Directors felt this would

negatively affect the interview and 25% felt it would threaten the entire application.

What we found interesting was that simply stating your interest in attending the program would be considered positively by 57.5% of respondents, and this increased to 80% if you could state why you wanted to enter the program. Furthermore, 55% felt that candidates not stating why they wanted the program would have a negative effect.

Interview Table

Question	Threatens Entire Application (%)	Strongly Negative Impact (%)	Negative Impact (%)	No Impact (%)	Positive Impact (%)	Strongly Positive Impact (%)	Virtually Assures Position (%)
Answered questions comfortably	0	0	0	10.0	65.0	22.5	2.5
Candidate appeared nervous	0	0	12.8	84.6	0	2.6	0
Established rapport with interviewers	0	0	2.5	2.5	75.0	17.5	2.5
Stated that s/he wanted to come to program	0	0	40.0	50.0	5.0	2.0	5.0
Did not state why s/he wanted to come to program	2.5	7.5	45.3	5.0	2.5	0	0
Explained why s/he wanted to come to the program	0	0	0	17.5	72.5	5.0	2.5
Reinforced why s/he wanted to come to program	0	0	0	10.0	67.5	20.0	0
Appeared insincere	5.0	40.0	30.0	0	5.0	0	0

Is it important to have straight A's or honours? Certainly it's helpful, as nearly 90% of Program Directors felt high marks would have a positive effect. However, only 30% and 17% of Program Directors felt that having a pass average during your course blocks and clerkship rotations, respectively, would count against you. If it's going to take all your time to achieve honours status and it will come at the expense of other aspects of your application, consider the specialty that you are thinking about applying to and make sure that you haven't left yourself vulnerable in other areas. Only you will know this as you

research the specialties that you are interested in and consider how suitable you will be for that specialty.

It is probably not surprising that the majority of respondents (87.5%) indicated that failing a course in pre-clerkship or clerkship would have a strong negative impact. Failing a clerkship course seriously threatens the entire application (25% of cases) with 95% of Program Directors claiming this would have a negative effect for the academic section. Nearly all (89.7%) of responding Program Directors felt that an A grade or Honours average in clerkship has a positive effect.

Academics Table

Question	Threatens Entire Application (%)	Strongly Negative Impact (%)	Negative Impact (%)	No Impact (%)	Positive Impact (%)	Strongly Positive Impact (%)	Virtually Assures Position (%)
Achieved honours or "A" average in pre-clerkship	0	0	0	15.0	45.0	35.0	2.5
Achieved pass average in pre-clerkship	0	5.1	25.6	64.1	2.6	0	0
Failed one or more courses in pre-clerkship	12.5	37.5	37.5	10.0	0	0	0
Achieved honours or "A" average in clerkship	0	0	0	10.3	43.6	41.0	2.6
Achieved pass average in clerkship	0	5.0	12.5	65.0	10.0	2.5	0
Failed one or more rotations in clerkship	25.0	45.0	22.5	5.0	0	0	0

CLOSING REMARKS

Career selection is a significant source of stress and anxiety for medical students. Previously, it was unclear which parts of the application were most important and how students should invest their time to maximize their chances of securing the program of their choice. The data that we have just presented to you should be helpful to maximize your chances at getting the residency of your choice but should serve only as guiding principles.

Future surveys are under way that will offer a breakdown of these kinds of questions by specialty so that you can further tailor your application. But it still doesn't replace the research that you have to do in the specialties that you are most interested in, and the introspection that you must do to ensure that there will be a good fit between you and your future career. Ultimately, you have to be happy with what you've worked so hard to achieve.

Section G

OTHER CONSIDERATIONS

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This section describes additional factors that may strengthen or weaken your decision to select a given program, including choosing the right environment, balancing family and medicine, and pursuing international health.



G-1

CHOOSING THE RIGHT ENVIRONMENT

Medicine is a broad field and the work experiences of physicians can vary from one to the next. To provide some perspective on the benefits and challenges of practice in rural, urban-based,

and tertiary medicine, we collated comments from physicians with specific experiences in each of these settings.

	Practice	Lifestyle
<p>RURAL</p> <p>Dr. Karl Stobbe, MD, CCFP (EM)</p> <p>Rural Program Coordinator Department of Family Medicine, McMaster University</p>	<p>GPs require a broad range of skills and interests: office work, inpatient care, ER, OB/GYN, OR assists, nursing home.</p> <p>Rural physicians often provide care that would otherwise be offered by specialists in an urban setting, e.g., neonatal resuscitation, palliative care, trauma stabilization/transport.</p> <p>Opportunity to receive additional training, such as anesthesia, surgery, C-sections, GI endoscopy, coroner.</p> <p>Increasing use of the Internet and teleconferencing to communicate with distant physicians and for continuing education.</p> <p>Increasing opportunities for research and teaching affiliation with academic medical centres.</p>	<p>More time spent on call.</p> <p>Proximity to nature provides easy access to outdoor activities, e.g., skiing, fishing, sometimes while on call. Establishing friendships and business relationships with patients, e.g., car mechanics, plumbers.</p> <p>Being a “celebrity” — known by most people in town.</p> <p>Crime rates lower in rural communities.</p> <p>Schools: Rural communities tend to have fewer resources to offer student with special needs, and high school science education may be higher quality in urban schools, leading some rural physician parents to arrange enrichment opportunities for their children.</p>
<p>URBAN-BASED</p> <p>Dr. David Price, MD, CCFP</p> <p>Assistant Professor & Director of Stonechurch Family Health Centre</p> <p>Department of Family Medicine, McMaster University</p>	<p>Must be familiar with and direct patients to available health resources in a larger community because services are often not centralized at one main centre.</p> <p>Intermediate-size population served.</p> <p>Opportunity to see the general scope of health care problems within any given specialty.</p> <p>Heavy clinical demands, although there are opportunities to serve on hospital boards.</p> <p>Being the main provider of care allows doctors to build rapport and be involved in patients' lives on a continuing basis.</p> <p>Increasing opportunities for research and teaching affiliation with academic medical centres.</p>	<p>Call duty can be heavy depending on specialty.</p>
<p>TERTIARY CENTRE</p> <p>Dr. Ally Prebtani, BScPhm, MD, ABIM, FRCP(C)</p> <p>Assistant Professor Department of Medicine Endocrinology and Metabolism</p>	<p>Patient care often involves complex and rare problems; based on referral.</p> <p>Much emphasis on promoting ongoing learning of residents, students, and colleagues.</p> <p>Requires patience and flexibility due to wide range of knowledge base and competence among learners.</p> <p>Involvement in various committees, e.g., academic journals, business, education.</p> <p>Research-oriented, e.g., clinical, basic science, health policy.</p> <p>Accessibility to new knowledge and innovative technology.</p>	<p>No in-house call required as a staff person.</p> <p>Non-clinical responsibilities provide a break from clinical demands.</p> <p>Requires living close to a large city.</p>

Issues of Balance

It's no surprise that residency life is challenging. Limited free time, chronic sleep deprivation, and the concurrent responsibilities of research, teaching, and reading are undoubtedly magnified in the context of marriage and children. The issue of balancing family life and medicine is a complex one and varies widely from one individual to the next. However, an awareness of some common issues can be helpful in formulating expectations and decisions about your training and career

path. In this section, an informal survey of residents (in Family Medicine, General Surgery, Internal Medicine, and Psychiatry) was done to provide a cross-section of opinions and experiences in these areas.

Scheduling electives without call responsibilities can make the workload more manageable for residents who are pregnant. Lindsey from Case 1 may be interested in this advice.

Common Themes in Residency	Challenges	Strategies/Resources for Management
Pregnancy	<p><i>"Finding time during work to have proper meal breaks."</i></p> <p><i>"Physical demands, especially during long procedures/surgeries."</i></p> <p><i>"Dealing with fatigue, especially in the third trimester."</i></p>	<p>Flexible Scheduling</p> <p><i>"It's been tremendously helpful to be able to schedule elective time at the end of my pregnancy that did not involve call responsibilities."</i></p> <p><i>"It was difficult to ask for time off during my residency, especially around the time of delivery. No one else was around to cover if I was gone."</i></p> <p>Program Support</p> <p><i>"The support of my Program Director has been wonderful. I had incredible assistance with moving scheduled blocks around to ensure I was on holiday around the time my wife's delivery."</i></p> <p><i>"In some programs, academic time is permitted without question, so that gives some flexibility around the time of childbirth."</i></p>
"After Hours" Academics	<p><i>"Work often doesn't end after you leave the hospital. It's a challenge to balance my family responsibilities at home with additional program commitments after work, e.g., reading, research, preparing presentations."</i></p>	<p>Support from Extended Family</p> <p><i>"Having a network of family and friends close by has taken off a lot of the pressure for me to be at home. It's nice to know your child is taken care of, even when it's on short notice!"</i></p> <p><i>"Hiring a good nanny is expensive but it has meant that I have more opportunity to get things done without worrying too much that my child's care is being compromised."</i></p>
Couple Time	<p><i>"Fatigue from long work — hours and family duties often left very few opportunities to spend time with my partner."</i></p>	—
Burden on Spouse	<p><i>"Being a resident makes it difficult to split parenting 50:50, especially during exam times."</i></p> <p><i>"Can be difficult for my spouse at times, gets 'burnt out' with little support."</i></p>	—

Helpful Advice

"Having my own family during residency has been challenging but very rewarding. My wife and kids make me look forward to coming home. The key is giving some serious thought ahead of time as to whether you want to start a family and how you're going to go about doing it."

"For female residents, I don't think there is ever a good time to consider pregnancy. People often say put it off to after you finish med school or residency or after getting a staff position. Starting a family is an intensely personal decision — do it when you feel it's right for you!"

"For male residents, try to plan your schedule ahead of time so that your schedule is relatively flexible around the time of your child's

birth. It will certainly be one of the busiest times in your life, so you want to make sure you have enough uncommitted time to spend with your baby and spouse."

Lindsey from Case 1 was interested in ways to make it easier to go back to work after maternity leave. Building a strong family relationship and hiring a nanny, as well as training part time and starting with lighter rotations, are strategies residents have cited in easing the transition back to work.

References

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Myers MF. *Doctors' marriages: a look at their problems and solutions*. 2nd ed. New York: Plenum Medical Book Company, 1994.

Introduction

As members of the medical profession, we have the unique opportunity to extend our responsibilities to marginalized populations across the globe. This section was created in response to the growing awareness and interest in international health (IH) issues. We highlight different ways that residents across the country have pursued their passion in IH throughout their training. We hope that this introduction will both inspire those who had never considered international medicine before, and encourage others who wish to seek out residency programs that are amenable to IH training. Feedback from residents interviewed for this section indicates that faculties across Canada are becoming more aware of IH issues, and are interested in becoming more involved. While there are currently few formal centres for IH across the country, interest and support generated at the faculty level in recent years have made IH training a definite reality.

While traditional interest in international medicine has been through Family and Community Medicine, Infectious Diseases, and Pediatrics, IH is not limited to these particular areas. There is potential to pursue rewarding international experiences in fields as diverse as Ophthalmology, Neurology, Psychiatry, and Oncology, as there is a need for all kinds of medical expertise in underserved areas. The spectrum of “international health” is quite large, and encompasses public health, human rights, peace

activism, health economics, health policy, occupational health, environmental medicine, and rehabilitation medicine.

We have profiled four residents from different Canadian institutions about their experiences in international medicine, and provided a number of resources on international health programs around the world.

It’s important to recognize that “international health” is not limited to practising medicine in the developing world. Rather, this is an area concerned with the health of especially disadvantaged populations — whether in Canada (inner-city poor, aboriginal populations, refugees/immigrants, and cases of imported emerging infectious diseases) or abroad. We hope that this section will serve as a gateway to exploring opportunities currently available both within Canada and beyond.

Educational Programs and Courses

Most of the programs listed below are offered in schools of public health (SPHs) and medical schools. Wherever possible, a URL is given for direct access to the school’s IH program. Boston University and Johns Hopkins SPHs have the largest IH Master’s and doctoral programs in IH, though many other schools offer strong IH programs. The University of Arizona offers a three-week summer program designed to prepare clinical medical students and residents for an international assignment. The ASPH listing provides access to all SPHs.

International Health Centres in Canada

Centre	Website
Dalhousie International Health Centre	http://ghomedicine.dal.ca
McGill University Centre for Tropical Diseases	http://www.medicine.mcgill.ca/tropmed
University of Alberta International Health Initiative	http://www.ih.ualberta.ca
University of Calgary International Centre	http://www.ucalgary.ca/ic
University of Manitoba Office of International Health	N/A
Université de Montréal Santé Internationale	http://www.usi.umontreal.ca/
University of Toronto Centre for International Health	http://intlhealth.med.utoronto.ca/

Canadian International Health Agencies

Centre	Website
Canadian International Development Agency	http://www.acdi-cida.gc.ca
Canadian Coalition for Global Health Research	http://www.ccghr.ca
Canadian Institutes of Health Research	http://www.cihr.ca
Canadian Society for International Health	http://www.csih.org
Global Health Education Consortium	http://www.globalhealtheducation.org
Student University Network for Social and International Health	http://www.sunsih.ca

Key Websites

Association of Schools of Public Health (ASPH) has links with its member schools, has a student page, describes the field of public health, describes opportunities for IH study and careers, and lists schools with IH Master's-level programs. — <http://www.asph.org>

Postgraduate Training Programmes in IH — This extraordinary Website, developed by Swiss institutions, provides access to detailed descriptions of a wide variety of p-g programs. The database allows searches by topic, institution, country, and type of program. — <http://www.healthtraining.org>

Boston Univ. SPH.

BU has a Department of IH and offers short duration certificate courses in IH. — <http://sph.bu.edu/International-Health/department-of-international-health/menu-id-108.html>

Brown Univ. Office of International Programs — <http://www.brown.edu/Administration/OIP>

Columbia Univ. SPH — <http://www.mailman.hs.columbia.edu/>

— The University Medical Centre is located at <http://cpmcnet.columbia.edu>. See also <http://cpmcnet.columbia.edu/dept/bgcu-md/> for a description of a collaborative MD degree program in International Health and Medicine with the Ben-Gurion University of the Negev (Israel). This program also provides opportunities for summer externships for 4th year medical students at BG Univ.

Emory Univ. SPH— <http://www.sph.emory.edu>

Fogarty International Centre for Advanced Study in the Health Sciences offers a variety of training, research and fellowship grants as well as international services. — <http://www.fic.nih.gov>

George Washington Univ. SPH— <http://www.gwumc.edu/sphhs>

Gorgas Courses in Clinical Tropical Medicine (sponsored by U of Alabama) – an annual course in the Tropics of Peru in the Amazon. — <http://gorgas.dom.uab.edu/>

Harvard Univ. SPH <http://www.hsph.harvard.edu/>. For the Takemi Program in International Health, for midprofessionals, see <http://www.hsph.harvard.edu/takemi/>.

Johns Hopkins Univ. SPH— <http://ih.jhsph.edu/>. JHU has the oldest and likely largest department-level IH programs in the United States.

Kigezi International School of Medicine, located in Uganda, now offers a program with a focus on global health care.

London School of Hygiene & Tropical Medicine — <http://www.lshtm.ac.uk>

Michigan State Univ.— <http://www.msu.edu/unit/iilh/>. This is the global health Website of the Institute of International Health at Michigan State University.

See also <http://www.msuglobalaccess.net> for MSU's Global Access Website. This URL provides a searchable database of over 5,000 links to information about health conditions in other countries, the location of medical centres, details of countries, health care systems, and access to international organizations involved in health-related issues.

Robert Wood Johnson Medical School — <http://rwjms.umdnj.edu/>

Supercourse in Epidemiology, the Internet and Global Health (at U of Pittsburgh) — This course has over 1,600 lectures online by more than 1,000 faculty, grouped into various categories; a rich source of materials and ideas. — <http://www.pitt.edu/~super1/>

Tulane Univ. SPH — <http://www.som.tulane.edu/departments/StudentAffairs/INTHEALTH.HTM> for IH electives open to Tulane and other fourth-year medical students in nine different countries.

Univ. of Arizona (College of Public Health) —

<http://www.globalhealth.arizona.edu> (for the International Health: Clinical and Community Care program that is held every summer)

Univ. of California at Berkeley SPH — <http://sph.berkeley.edu/>

Univ. of California at Davis — <http://www.ucdavis.edu/index.html>

Univ. of California at Los Angeles SPH — <http://www.ph.ucla.edu>

Univ. of Florida— <http://www.med.ufl.edu>

Univ. of Maryland, summer research program — N/A

Univ. of Michigan SPH— <http://www.sph.umich.edu/>. See UM's Population Fellows program at <http://www.sph.umich.edu>

Univ. of Nebraska Medical Centre — Offers Spanish/International Health/Wilderness & Tropical Medicine (Belize) courses in Guatemala that integrate individual Spanish language instruction, lectures and field trips, and a Wilderness & Tropical Medicine course. — [http://www.unmc.edu/ International studies and programs](http://www.unmc.edu/International_studies_and_programs) -- <http://www.unmc.edu/isp>

Univ. of North Carolina at Chapel Hill SPH — <http://www.sph.unc.edu>

Univ. of Pennsylvania — <http://www.med.upenn.edu/globalhealth/>

Univ. of Pittsburgh SPH— <http://www.publichealth.pitt.edu>

College of Public Health at the University of South Florida — For studies, see: <http://health.usf.edu/publichealth/globalhealth.html>

Univ. of Texas at San Antonio — See especially the four-week summer elective/rotation ("STEER") held at the border cities of Laredo, Texas and Nuevo Laredo, Mexico and focusing on international health, environmental health, public health, and border health issues. — <http://steer.uthscsa.edu>

Univ. of Toronto — See: Centre for International Health at: <http://intlhealth.med.utoronto.ca/>

Univ. of Washington — IH program, including a China exchange program that is sometimes open to non-U of W students — <http://globalhealth.washington.edu/>

Yale University, SPH — <http://publichealth.yale.edu>

Careers in International Health — Profiles: University of Alberta, University of Calgary

	University of Alberta	University of Calgary
Name	Lynora Saxinger	Lindsay Ryerson
Occupation	Infectious Diseases	Pediatrics
Years in practice	2 years (graduate fellowship, 2001)	PGY3
Type of practice	85% clinical, 15% research	Starting Pediatric Cardiology in July 2004
Time in research	None	None
Family status	Married	Single
Average hours per week	51–70	>100
Funding to pursue IH training	Travel expenses through Dept. of Medicine and Infectious Diseases	So far, adequate through Canadian Paediatric Society
What do you like most about your job?	It's the most interesting area of medicine!	Patients, procedures, colleagues
What would you improve?	Time demands	Less bureaucracy
Spare time	Gym; painting	Running, mountain biking, skiing, reading
Does family life suffer?	Sometimes	Quite often
Job satisfaction (rated 1 to 10)	9	8
When did you become interested in IH?	During ID fellowship in Zimbabwe	During medical school
IH work prior to residency	None	No
Did interest in IH influence choice of residency program?	No, but it influenced my choice of subspecialty	No
IH training during residency	PGY5: IH fellowship in Zimbabwe	None
Do you plan on continuing IH work into the future?	I want to integrate IH training at work at the U of Alberta, and continue going overseas.	I would like to keep working in IH in a teaching capacity.
Balancing interest in IH with family life	Shorter trips, more limited commitments, get spouse involved	Take them with me!

Careers in International Health — Profiles: University of Ottawa, University of Toronto

	University of Ottawa	University of Toronto
Name	Heather MacDonnell	Barry Pakes
Occupation	Pediatrics	Family Medicine resident
Years in practice	Fellowship year	PGY2
Type of practice	Academic Pediatric Medicine	
Time in research	Yearly IHMEC conference; one-month elective per year in IH; residency representative on the IH section of the Canadian Paediatric Society	Not as much as desired: more time spent preparing for experience than doing it! Go to as many conferences as possible
Family status	Single	Married
Average hours per week	51–70	Variable with rotations
Funding to pursue IH training	Use of residency conference allocation, but funding is not secured for future interests	Adequate funding from Medical Alumni Association
What do you like most about your job?	Working with children and their families, variety of clinical scenarios, professional and congenial hospital environment	Appreciation for non-medical aspects of community care, including epidemiology and philosophical practical/political aspects of humanitarian intervention
What would you improve?	Long hours	So far, so good
Spare time	Travel, competitive tennis, language classes	Co-chair of Residents Without Borders, reading, travelling
Does family life suffer?	Sometimes	Not yet
Job satisfaction (rated 1 to 10)	8	9
When did you become interested in IH?	During residency through vaccination program in Papua, New Guinea	During high school while travelling through Middle East; during medical school in Eastern Europe and Africa
IH work prior to residency	Not specifically	1st year med: with youth in Ukraine and Belarus; 2nd year med: primary care in Ethiopia and relief work in Kenya
Did interest in IH influence choice of residency program?	No, but Ottawa Paediatrics is amenable to IH electives.	Yes — Family Medicine has a broad scope and flexibility of practice, and possibility for further training.
IH training during residency	Elective in Pediatric Tropical Medicine in Rajasthan, India	PGY1: travel medicine clinic; rural elective in Zimbabwe. Master's at Harvard School of Public Health
Do you plan on continuing IH work into the future?	Further training (Diploma in Tropical Medicine), volunteering as pediatric educator, participate in international adoption clinics, continue attending IH conferences	Humanitarian disaster management; teaching, and ethics
Balancing interest in IH with family life	Participate in at least one IH program per year, and hopefully family will share these interests.	It won't always be easy.

Section H

THE APPLICATION PROCESS

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This section provides a broad introduction to what CaRMS is all about and will orient you to the process. Furthermore, it takes you through your medical school years, providing some advice on what you can do to maximize your chances of matching to the residency of your choice.

It also takes you through the application process step by step. It provides detailed information on each component of the application process, including:

- › *Transcripts*
- › *Dean's report*
- › *Reference letters*
- › *Personal statement letters*
- › *Curriculum vitae*
- › *The interview*

This information will give you guidelines on how to put your best foot forward, including how to:

- › *Provide great references*
- › *Write the "perfect" personal letter*
- › *Provide a clear and concise curriculum vitae that highlights your strengths*
- › *Impress the panel of interviewers at your personal interview*



What Is CaRMS?

CaRMS is a not-for-profit, fee-for-service corporation that works in close cooperation with medical schools and students to provide a computer match for entry into postgraduate medical training. A board of directors governs CaRMS and represents all stakeholders in Canadian medical education.

Member organizations on the Board of Directors include:

- The Association of Faculties of Medicine in Canada
- The Royal College of Physicians and Surgeons of Canada
- Canadian Medical Association
- Federation of Medical Regulatory Authorities of Canada
- Canadian Federation of Medical Students
- Canadian Association of Interns and Residents
- Association of Canadian Teaching Hospitals
- The College of Family Physicians of Canada

CaRMS provides an efficient way for applicants to decide where to train, and allows Program Directors to decide which applicants they wish to enroll in postgraduate medical training.

The matching system guarantees that decisions about residency selection will be made by both applicants and Program Directors by a specific date without pressure being placed on applicants to make decisions before exploring all options.

The CaRMS website, contains information for students registering for the match. It covers eligibility, procedures, statistics on the previous year's match, CaRMS policies, and the timetable for the current year (see <http://www.carms.ca>).

How CaRMS Works

The following is an outline of the information that can be found on the CaRMS website (www.carms.ca)

Eligibility for the Match

- › Basis for eligibility
- › Students graduating from Canadian medical schools
- › Students graduating from medical schools in the United States
- › Physicians who graduated prior to the current Match year in Canada and the United States
- › Physicians who have graduated from international medical schools
- › National Resident Matching Program (NRMP) applicants
- › Applicants to Obstetrics/Gynecology programs in the United States

First Iteration of the Match

- › Timetable for the first iteration of the match
- › Registering with CaRMS (including students funded by National Defence and couples)
- › CaRMS Applicant Match Contract
- › Application for postgraduate medical training

- › Applicant's Designation List
- › Curriculum vitae
- › Fees
- › Late application
- › Supporting documents
- › Medical school transcript
- › Dean's letter/report
- › Reference letters
- › Personal statement letters
- › Interviews
- › Applicant's Rank Order List
- › Confirmation of rankings on computer
- › Address changes
- › Withdrawal from CaRMS
- › Match-results delivery system
- › Matched applicants
- › Unmatched applicants
- › Additional services
- › Education receipts
- › Important addresses
- › CaRMS policies
- › Statistics of the previous matches
- › The computer matching process explained

General Information on Postgraduate Training

Postgraduate graduate training is the training you receive after you have received your MD. Residencies range from two to six years and are university-based (compared with U.S. residency programs, which are hospital-based). After residency, you can go for further training by completing a research or clinical fellowship in a specific area (one to two years). There are several ways to find places to do your postgraduate training.

In Canada:

1. via the Canadian Residents Matching Service (CaRMS) — largest
2. via the Department of National Defence (DND) — for Family Medicine only
3. via Les Universités francophones au Québec

In the U.S.:

1. via the National Resident Matching Program (NRMP)
2. via positions found outside of this service

We focus on the CaRMS pathway because it is the one most frequently followed.

The CaRMS Application Timeline

(Sample only — may change from year to year)

The CaRMS application calendar begins in July of your third year.

August

- › Update your CV and start working on your personal letters.
- › Consult resident and staff physicians for tips.
- › Contact referees about writing you a reference letter.

September

- › Ensure all references have been contacted and finalize your CV.
- › CaRMS tokens are distributed.

September 30 — Deadline

- › Application form and CV must be sent to CaRMS.

End of October

- › Required documents ((Medical Student Performance Record (MSRP), transcripts, extra documents, CV) must be sent to CaRMS.

Late November

- › Online application (AWS), personal letters, and reference letters are due to CaRMS.

November 1 — Deadline

- › Transcripts are forwarded by Student Affairs Office to CaRMS with Dean's report.

December

- › CaRMS mails your file to programs.

January

- › Start arranging interviews (most programs will contact you).

November — February

- › Interviews (most occur during the first three weeks in January).

February

- › Interviews.
- › Begin thinking hard and carefully about the order you will rank programs.

Late-February — Deadline

- › Deadline for Rank Order Lists.
- › Deadline for withdrawal from CaRMS.

Mid-March

- › Match Day (note: there is no unmatched day).

April

- › Second Match Day (for the second iteration).

Mid-May

- › LMCC Part I Exam.

Mid-June

- › Convocation for graduates.

July 1

- › Residency begins!

H-2

ELECTIVES

The Basics

It's commonplace to hear first- and second-year medical students talk excitedly about their "elective" experience during their summer months or school year. Their experiences often involve shadowing a physician around the wards in the early hours of the morning, attending noon rounds with the hospital residents, and staying up in the late hours with the team that's on call. While these medical students have had valuable experiences, it cannot be stated that they have done an elective. What these students did, in fact, was an "observership." So, what exactly is an elective?

By definition, an elective is a rotation during clerkship whereby the student has the choice of learning about a particular field of medicine (Research, Rural Medicine, Emergency, Surgery, etc.). The number of elective rotations and the total number of weeks dedicated to electives can vary between medical schools. During this time, the student will undergo an evaluation of his/her knowledge, skills, and behaviour similar to that in the core clerkship blocks and, thus, obtain credit for their work, which will be recorded on their academic transcript.

Maximizing Elective Experience

When Should I Do an Elective?

It is a matter of personal choice when one does medical electives. In making this choice, keep several things in mind in order to make an accurate and complete decision. Some people

like to start their electives after completing many of their core rotations. The advantage of this decision is that they have more experience in different areas of medicine prior to choosing an elective interest. However, some students argue that it is better to choose an elective earlier on in the year just after summer break, when they have more energy. Again, it is a personal decision. The approach to making elective choices, both in timing and in type, depends upon what information the student hopes to obtain from the elective. Is the elective for career sampling or is it to make contacts in a specific discipline? Would having more clinical skills and confidence work to the student's benefit in a specific elective?

In What Should I Do an Elective?

This can be a difficult decision. Some students take the elective as an opportunity to learn about a field of medicine that differs from their core clerkship rotations, such as Neurology or Anesthesia. Other students feel compelled to take on an elective in their field of interest as proof to residency directors of their interest and commitment to their specialty. Other students are more interested in academic careers and may decide to complete a research elective. Again, choose a rotation that you are interested in.

With Whom Should I Do My Elective?

Many students, unfortunately, do not give this much priority when deciding their elective of choice. Your elective supervisor can very often determine the quality of your experience from the

elective. Common sense states that one should ask the physician who has the time to teach and enjoys teaching. The best advice on finding an excellent teacher who is not too busy would come from students and residents who have done electives with various supervisors. Some students decide that teaching quality is not so important as the position of their teacher. Staff on the residency program committees are often popular choices for elective teachers. Again, what you look for in an elective teacher really depends on your priorities.

Where Should I Do My Elective Rotation?

This depends on what you are looking for. If you are interested in learning about a foreign culture, then an international medical elective would be ideal. If your interest are in rural Canadian medicine, then perhaps one of the Northern Medical Electives might be the right choice.

What if I Want To Do a Rural Elective?

A variety of opportunities are available for medical students to experience medicine in northern rural communities. Medical practice in the north is quite different than the south due to extreme distances from larger medical centres. A medical student who has not done core clinical rotations in Internal Medicine, Pediatrics, Obstetrics, and Family Practice is not likely to be able to obtain maximum learning from well-planned electives.

The Northwestern Ontario Medical Programme (NOMP) was developed in 1972 as a collaborative venture by the Thunder Bay Medical Society, the Northwestern Ontario Medical Society, the Ontario Ministry of Health, and McMaster University. The main objective of NOMP is to provide a variety of northern urban, rural, and remote clinical education opportunities in Northwestern Ontario for undergraduate medical students, interns, and residents in settings ranging from Wawa on the east to Kenora on the west.

NOMP — Health Sciences North

955 Oliver Rd., Thunder Bay ON P7B 5E1
Tel: (807) 343-2101, Fax: (807) 343-2104

The Northeastern Ontario Electives Program (NEP) was developed in 1995 as a collaborative venture among the Northeastern Ontario Family Medicine Program (NOFM), the University of Ottawa, the Ministry of Health, and the Ministry of Northern Development and Mines. NEP has similar objectives as NOMP. Sites for elective range from Hearst to Parry Sound. For information regarding this program, contact the

Northeastern Ontario Electives Program

1942 Regent Street South, Unit G, Suite 127,
Sudbury ON P3E 3Z9
Tel: (705) 688-0200, Toll Free: (800) 461-8777, Fax: (705) 671-1688
Email: nofm@nofm.laurentian.ca

H-3

THE MASTER APPLICATION

This next section gives tips, suggestions, and examples on how to create the most effective application.

There are five components of the CaRMS application. The interview will be covered separately in the next chapter.

- › Transcripts
- › Dean's letter/report
- › Reference letters
- › Personal statement letters
- › Curriculum vitae

Transcripts

The Office of Student Affairs (Registrarial Section) will automatically forward your transcript to CaRMS. The transcript is not automatically forwarded to NRMP in the United States. Students will need to complete a Document Order Form (see your Medical Education Dept.) to request that a transcript is forwarded directly to the Program Directors at the medical schools you indicate.

Dean's Letter/Report

The Dean's letter/report is a combination of transcript information and comments from the evaluations of your clerkship rotations and electives. It is automatically forwarded by the Undergraduate Medical Education Office to CaRMS.

Prior to forwarding to CaRMS, a copy is provided to each student to check for errors. If errors are found, students must make them known to the Clerkship Administrator.

1. Make sure you have proofread the Dean's report carefully and corrected all factual or spelling mistakes.
2. Depending on what you are applying for, you may not want certain comments included, even if they are positive. (e.g., three of six comments state you are an excellent Surgery candidate when you are applying to Psychiatry).
3. If you have kept your evaluations you will be able to choose other comments and confirm the correctness of the comments already included.

Reference Letters

As the CaRMS website outlines, obtaining letters of reference and all follow-up is the responsibility of the applicant. CaRMS is not involved in collecting, tracking, or copying your reference letters.

CaRMS has developed guidelines for referees on the content of a good reference. CaRMS advises that applicants provide each referee with a set of preprinted mailing labels to assist in the preparation and accurate delivery of your reference letters. Many students use Express post services with tracking numbers to ensure their letters have been mailed and received at CaRMS by the deadlines.

Applicants should refer to individual programs in the CaRMS Program Directory to determine specific requirements, such as the number of letters of reference required, who is qualified to write a reference, what qualities the referee should comment on, and when references should be at the program office. This program-specific information can be found under the headings "Reference Letters" and "Selection Criteria" on each program description page.

After reading the program requests regarding referees, choose a referee who has supervised your clinical performance for not less than three or four weeks.

Referees send the letters directly to the programs you specify, using the labels or the pre-addressed envelopes you provide. The reference letters must arrive at the programs by their individually set deadlines.

Who to Ask: The Ideal Reference

- › According to the Program Directors Survey, letters that carry the most weight are from Clinicians that the program knows and respects. This includes experts in the specialty but also the Clinicians who are working in the program you are applying to. You will need at least one letter from a Clinician in the specialty.
- › Don't forget about asking other credible references who think you are a superstar, no matter what specialty or research background they are from. The people you ask will depend on the program(s) that you are applying to and any unique attributes that you bring to the table. No Program Director would hold this against you and it may help "round out your application" in about 40% of programs. If you have done formal training in research and your research supervisor can attest to your scientific genius, ambition, and determination, then this is also helpful. Just remember to get the core references from the physicians in the specialty you are applying to.
- › Ensure that you follow the directions regarding reference letters outlined by each Program.
- › People who are not credible references may detract from your application (e.g., friends, relatives).
- › If you are applying to several specialties, strategize on the specificity of your referee letters. You may decide to send certain letters of reference only to certain programs. It is essential in these cases that you make time to meet with your referees and talk with them about your career plans. You want to avoid general statements like "John is destined to become a superior academic surgeon" if you are also sending this reference to Internal Medicine programs.
- › One option is to request that referees individualize each letter for specific programs. Another option is to inform the referee that you are applying to more than one specialty and that you would appreciate it if they refrained from making specific recommendations about certain specialties or programs.

When to Ask

Don't be afraid! If you want a letter from a particular individual, ask for one. But ask for it at the right time and in the right way. If you are on a clinical service with the individual, ask while you are on the service, or soon afterwards. No matter how wonderful you are, the faculty member's memory of you will fade. Ask if the letter can be drafted now and say that later you will give him or her the list of programs it should be sent to.

How to Ask

Ask for the letter directly. However, make sure you phrase your request in such a way that you will not be saddled with a negative or neutral letter. One way of doing this is asking the individual if he or she would feel comfortable writing you a strong letter of support. If the answer is anything but a strong yes, go elsewhere.

What to Give Them

- › Give your reference person some information to make the task easier.
- › Areas the letter should address
- › Past evaluations
- › Curriculum vitae
- › Personal statement
- › Deadline of when the letters have to be submitted
- › List of names and addresses that the letters need to be sent to

What They Should Say

Below are some suggestions about what your referees should include. After they have agreed to write a letter of reference for you, send them a letter with the above information, thanking them again for the reference, and asking them if in their letter they could also address the following points.

The specific points that you want emphasized will depend on the reason that you have asked this person to be a referee and the specialty you have applied to. Some ideas are listed below. You now know from your research of the specialty exactly which attributes they are looking for and on which ones this referee will be best able to comment. Keep a copy of the formal evaluations that you get after your electives and rotations — they can be very helpful for predicting who will be best at singing your praises.

Guidelines for Referees

In general, reference letters should include

- › The type and duration of the referee's contact with the individual student
- › Whether or not the student has seen or will receive a copy of the letter
- › Appropriate comment on the student's
 - cognitive skills and knowledge
 - problem-solving and patient management
 - behaviour and attitudinal skills
 - communication skills and working relationships
 - ability to work in a team

If the referee is unable to comment on a specific component of the student's performance in any of the above categories, he/she is asked to indicate that he/she did not observe or have knowledge of that particular component. Referees are encouraged to comment on any special qualities they noted or unique contributions of the applicant.

Areas to address in a letter of reference: Tips from other schools:*

A) Scholastic Record

- › Standing in graduate class
- › Honours/commendations in courses
- › Other honours

B) Medical Abilities

- › Interaction with patients
- › Diagnostic ability
- › Physical examination ability
- › Laboratory use and interpretation
- › Use of pharmacological agents
- › Clarity/completeness of charts

- › Clarity/completeness of oral presentations
- › Knowledge of medical literature

*From “The CaRMS Process Explained,” Faculty of Medicine, University of Ottawa.

C) Personal Characteristics

- › Relations with peers, faculty, ancillary staff
- › Willingness to assume responsibility
- › Dependability
- › Integrity—moral and ethical qualities
- › Industriousness
- › Initiative
- › Motivation
- › Interest
- › Maturity
- › Flexibility
- › Sense of humour

Personal Statement Letter

Introduction

Different programs have different requirements for personal letters. It may be necessary to write a different personal letter for each program, depending on the selection criteria. Most of the programs state that the personal letter is an important factor in their choice of candidates. Your letter may get you an interview, and it can work to confirm the impression you make in the interview. For maximum impact, write clearly. Keep the letter to the maximum length stated in the program-specific instructions.

The Six Key Components of a Good Letter

BE FOCUSED. Don't waste the readers' time. Take your first cue from the program self-description in the CaRMS Program Directory. Study the specifications for the personal letter, and look also at the rest of the page, reading between the lines as necessary. Does the program stress public service, research, or breadth? Does the main requisite seem to be maturity, interpersonal skills, and/or academic ability? Does the text suggest concern about level of commitment, ability to handle pressure, communication skills? Decide accordingly what main overall point you want to make — that you are a potential researcher, that you are eager to gain broad experience, that you work well on a team, and/or that you have special sensitivity to patients' needs.

BE LOGICAL. In the letter format, the opening and the conclusion can briefly express polite sentiments of gratitude, hope, enthusiasm, etc. But the body of the letter needs to support the key point: I'm the right person for your program. To meet the inevitable resistance in the readers' minds, the most logical structure will state the inclusive answer succinctly (as above), and then give evidence in a set of paragraphs. Choose the aspects you discuss according to your analysis of the program; then set out evidence from your past experience to develop each point.

BE COHERENT. Being “together” is a quality of writing as well as of character. Be sure that all of your ideas relate to your overall point, and that you show their relationship to each other. A key editing tactic is to check the topic sentences of each paragraph to see that they signal steps along the overall path. At the sentence level, don't rely on vague linking words such as “also,” “however,” and “thus.” More precise subordinating terms like “because” and “although” give a firmer sense of internal logic. Take the time to work out exact relationships. Ask a friend or mentor to give you an opinion on the quality of your letter.

BE INTERPRETIVE. You need to make a clear impression of yourself, so don't use your letter just to repeat the facts set out in the CV and transcript. Provide explicit answers for the question that arises in the mind of any reader facing a pile of similar documents: “So what?” Use nouns and adjectives that name desirable qualities (sensitive, flexible, mature) and verbs that show relevant actions (coordinated, investigated, maintained). Start with the words in the program description, and then find more exact terms to fit the evidence you are offering. Be specific. There's no point making claims unless you can back them up. Refer to the fact listed in other parts of your application (“as my academic record shows”), but be sure to offer enough examples in your letter that it can stand on its own. Say that they are just instances, not your whole proof (“An incident from my Pediatrics elective is an example....”). The concrete language you use for these specific references will also balance the generalizing words of your interpretive points. Beware of overworked and unconvincing openers such as “I have always wanted to be a pathologist” or “When I had the measles, I realized I should become a pediatrician.” Select only the most relevant aspects of the stories, and make sure they are clearly related to the analytic point about your suitability for the program.

BE PERSONAL. Your letter is a preliminary interview. In effect, the readers have asked you to tell stories, mention details, and expand on facts they already know. They want to know that you are strong enough to look at yourself analytically. You can mention things you might not have put into the rest of the application — your family circumstances, ethnic background, or political interests. Don't be afraid to mention problems or difficulties; stress how you overcame them. Use “I” rather than stuffy phrases like “this writer” or “my experience” or “was experienced by me.” To avoid monotony, start some sentences with a subordinate clause such as “While I washed test tubes” or “Because of my difficulties” — then go on to “I did” or “I learned.”

STYLE. Don't give your readers any excuses to eliminate your letter. Be concise — don't dilute your effects. Proofread carefully for missing details, as well as errors in grammar or punctuation. Get other people to check, too. Aim for clarity and logic of sentence structure. Avoid overloading the prose with jargon or pretentious words — your letter should demonstrate your ability to communicate with patients as well as colleagues. To sound dynamic, use active verbs (“I want to treat patients”) rather than passive verbs or abstract nouns (“My wish is to be engaged in the treatment of patients”).

Food for Thought

Prior to entering medical school your autobiographical letter required information from you about the following topics:

- › What have you done? Why? What have you gotten out of it?
- › Who are you?
- › Where are you going? How are you going to get there?

Now that you are about to finish medical school, your personal letter may be similar in style. Think about yourself as the medical student looking back at the overall accomplishments of your life experiences.

Clearly State Your Objectives

- › Think about your attributes, experiences, contributions, and strengths over the years, and particularly in medical school — creativity, challenge, research work (if any), problem-solving and/or analytical skills, strengths, etc.

- › Speak about your personal qualities as a well-rounded student who enjoys life and academics.
- › Go through the directory and review and outline each institution's unique requirements and goals.
- › Follow all pertinent deadlines as outlined in the CaRMS Handbook.
- › Organize your thoughts based on the requirements outlined by each program.
- › Build a database of program-specific requirements.

Curriculum Vitae

Developing a CV

While you may not yet have had the experience of preparing a formal curriculum vitae (“course of life”), you are already familiar with its function and the type of information needed from your applications for employment, college or, for that matter, medical school. Indeed, one of the primary functions of a CV is to provide a succinct chronicle of your past experiences and training.

In a sense, a CV is a multipurpose, personal application form for employment, educational opportunities, honours and awards, or membership or participation in an organization.

Learning to prepare a good CV now will aid you throughout your professional life. It is a living, not static, document that needs to be updated continually as new experiences or accomplishments are completed. Despite its multiple purposes, your CV must be restructured and rewritten, or at least reviewed, for each specific purpose for which it is to be used. It might be entirely inappropriate to include a lengthy list of publications in a CV you are submitting as application for membership in a volunteer organization. On the other hand, it might be imperative to include this information, if not in the body of, at least as an appendix to, a CV you are submitting to obtain an academic position.

Some experts recommend maintaining two versions of your CV — one, a short summary of your training and experience, and the other, a longer version with more detailed information about your publications and presentations. In general, however, no CV should be lengthy. No matter how many accomplishments you list, you won't impress anyone who can't quickly pick out two or three good reasons to choose you over someone else. Let your CV help you put your best foot forward.

When applying to residency training programs, a chronological format is very appropriate for most medical students. Here are some tips to help you get started:

General Tips

- › A chronological CV should be arranged in reverse chronological order. It should be immediately apparent where you are presently. It may be difficult to decide at first what is appropriate to include in your CV. It may seem that the residency application forms have already captured everything you have to say about yourself. Try to remember that an application form is limited to the few things that a particular institution wants to know about everybody. A CV lets you give information that is unique to you. Try putting in everything you can think of at first. Pull it out later if it doesn't seem pertinent.
- › The appearance of your CV is extremely important. When you have finished designing the content and format, consider having it reproduced by a commercial printing service using an offset printing method. Alternatively, you can produce it yourself providing you have an excellent letter-quality printer.

Use standard size 8½ by 11-inch paper in a white or very lightly coloured stock.

- › The language of a CV is abbreviated and succinct. Resist the temptation to append explanatory sentences or language that will distract the reader from the basic information being presented. When applying for residency training, you will have the opportunity to express yourself in a personal or biographical statement. In the future, when applying for a job or some other type of position, you will want to include an appropriate cover letter with your CV to explain your particular qualifications and strengths for the position.
- › Everybody's CV is different. Even using the same format suggested in this section, your CV will not look the same as others around you because it doesn't have the same content. Don't despair if you discover that your CV is not done in the same way as a friend's applying to the same residency program. There is enough variation in format that no Residency Program Director is looking for a specific style.
- › Be honest. If you haven't accomplished anything in a particular category, then leave it out. Don't create things to fill in the spaces. You can be specific about your level of participation in a project or activity, but don't be misleading.

Basic CV Outline

Personal Data

Give your full name. Make sure you can be reached at the address, telephone number, and email address that you list. You should check each on a frequent basis. Include hospital paging phone numbers, if appropriate. Indicate if there are certain dates when you can be reached at other locations. You may include some personal information, such as date of birth and marital status, at the beginning of your CV, or you may summarize it all in one section, if you choose to add it at all.

Keep in mind that, by federal law, employers are prohibited from discriminating on the basis of age, race, sex, religion, national origin, or handicap status. Therefore, you do not have to provide this information. Discrimination on the basis of sex includes discrimination on the basis of child-rearing plans (i.e., number of children or plans to have children).

Although the following items appear quite frequently, they are probably not necessary and may be unwise to include in a CV. These items include social insurance numbers, license numbers, and examination scores. If this information is pertinent to your candidacy, it will be asked for on the application or at some later point in the application process.

Education

List your education in reverse chronological order, starting with your current place of learning. Include the name of the institution, the degree sought or completed, and the date of completion or date of expected completion. Remember to include medical school, graduate education, and undergraduate education. Omit high school. Later, you will add separate categories for “Postgraduate Training” (includes residencies and fellowships), “Practice Experience,” “Academic Appointments,” and “Certification and Licensure.”

Honours and Awards

Any academic, organizational, or community awards are appropriate, but use your own judgment as to whether an achievement that you value would be valuable to the person reading your CV.

Professional Society Memberships

List any professional organizations to which you belong and the years of your membership. Include leadership positions held, if any.

Employment Experience

List the position, organization, and dates of employment for each work experience. Try to confine this list to those experiences that are medically related (med tech, nurse's aide, research assistant, etc.) or that show breadth in your work experience (high school teacher, communications manager, etc.).

Extracurricular Activities

List your outside interests or extracurricular activities. It will help to develop a broader picture of your personality and character. Also, any special talents or qualifications that have not been given due recognition in other parts of the CV should be highlighted here or in a separate section. For example, you'll want to include things like fluency in other languages, or a certification, such as a private pilot's licence.

Publications/Presentations

List any papers published or presented by title, place, and date of publication or presentation. If this list is very lengthy, you may want to append it separately or note "Provided Upon Request."

References

You may be asked to provide both personal and professional references. These names may be included in the CV, appended as part of a cover letter or application form, or noted "Provided Upon Request."

What Program Directors Want and Don't See Enough of in CVs

- › Include all academic and non-academic (music, sports, etc.) accomplishments.
- › Do it in reverse chronological order — last activities highlighted first.
- › Don't embellish your resume.
- › Avoid gaps — periods of time on your resume when the reader will not be sure what you were doing.
- › Include community work, research, hobbies, teaching experience, etc.
- › Include previous medical experience, electives, subspecialties, publications, etc.

Example #1 of a successful CV

Jane Doe

21 Major Street
Toronto, Ontario
M5S 2G6
(416) 515-9494 (home)
(416) 790-0776 (pager)
jane.doe@utoronto.ca

EDUCATION

- 2003–present **Doctor of Medicine**, University of Toronto
- 2001–2003 **Master of Science in Aquatic Ecology**, University of Toronto
- 1996–2000 **Honours Bachelor of Science in Ecology**, University of Toronto

AWARDS, HONOURS

- 2003–present **Honours Standing, Years I, II, III**, Faculty of Medicine, University of Toronto
- 2003 **Alex G. Climans Scholarship**
High academic standing on admission to medical school
- 2001–2003 **NSERC Postgraduate Scholarship**, NSERC
Research funding awarded to high-calibre graduate students
- 2000 **High distinction**, University of Toronto Graduation
- 1998–2000 **Later Life Learning Scholarship**, University of Toronto
Awarded to Innis College students for outstanding academic performance
- 1999 **Edward Murton Walker Scholarship**, University of Toronto
Awarded to a Zoology student in recognition of academic achievement
- 1999 **NSERC Undergraduate Summer Research Award**, NSERC
- 1998 **John D. Schultz Scholarship**, Ontario Heart and Stroke Foundation
Awarded based on academic performance and research potential in cardiology

MEDICAL ELECTIVES

- 2007 **Rotating Primary Care and HIV/AIDS** (5 weeks, proposed)
Dr. Larry Gelmon, Nairobi, Kenya
- 2006 **Rural Obstetrics and Gynecology** (4 weeks)
Ambulatory Community Selective
Dr. Sharon Laval, Timmins, Ontario
- 2006 **Rural Family Medicine** (2 weeks)
Dr. James Noiles, Medical Associates Clinic, Nelson, British Columbia
- 2006 **General Internal Medicine** (2 weeks)
Dr. Herbert Ho Ping Kong, Toronto Western Hospital, Toronto, Ontario
- 2006 **Internal Medicine Consults** (2 weeks)
Dr. Valerie Palda, St. Michael's Hospital, Toronto, Ontario
- 2006 **Family Medicine** (3 weeks)
Dr. Naveed Nawab, Parkdale Community Health Centre, Toronto, Ontario
- 2006 **Emergency Medicine** (3 weeks)
Dr. Laura Hans, St. Michael's Hospital, Toronto, Ontario

RESEARCH

- 2004–2005 **Assessing need and follow up for STI testing and ongoing contraception in users of emergency contraception.**
Dr. Sheila Dunn, The Bay Centre for Birth Control, Toronto, Ontario
- 2001–2003 **Minimizing the influence of sampling variation in ordination and in the field for lake fish communities.**
Dr. Donald Jackson, Department of Zoology, University of Toronto
- 1999–2000 **Benthic carbohydrates and proteins as a potential food source in the littoral zone of freshwater lakes.**
Dr. Helene Cyr, Department of Zoology, University of Toronto.
- 1999 **Sediment mixing patterns in the littoral zone of freshwater lakes.**
Dr. Helene Cyr, Department of Zoology, University of Toronto
- 1998 **Effect of a sodium-hydrogen exchange inhibitor on cardiac recovery.**
Dr. Morris Karmazyn, Department of Physiology, University of Western Ontario

PUBLICATIONS

Doe J, Jackson DA. Multivariate community ecology: interactions between sampling error, gradient length, and ordination method (submitted to Ecology)

Haist JV, **Doe J**, Karmazyn M. 2003. NHE-1 inhibitor cariporide exerts full cardioprotection under ischemic preconditioning blockade. American Journal of Physiology Heart and Circulatory Physiology 284: H798-H803.

Doe J, Cyr H, Jordan IA. 2003. Distribution of exopolymeric substances in the littoral sediments of an oligotrophic lake. Microbial Ecology 46(1):22-32.

Karmazyn M., **Doe J**, Haist JV. 2000. Na⁺-H⁺ exchange inhibition is superior to ischemic preconditioning and fully protects the ischemic reperfused rat heart under preconditioning blockade. Circulation supp 102(18): II-137.

PRESENTATIONS

Doe J, Jackson DA. 2003. Optimizing sampling methods in lakefish communities. Presentation at the 56th annual meeting of the Canadian Conference for Fisheries Research (CCFR), Ottawa, Canada.

Doe J, Jackson DA. 2002. Improving sampling protocol for nearshore lakefish communities. Presentation at the 132nd annual meeting of the American Fisheries Society (AFS), Baltimore, U.S.A.

Doe J, Cyr H. 2000. Exopolymeric substances in the benthic zone of freshwater lakes. Presentation at the 10th annual meeting of the Great Lakes Research Consortium (GLRC), Syracuse, U.S.A.

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

2005 **Interviewer** for medical school applicants, University of Toronto.

2004–2005 **Coordinator**, Books With Wings project, Faculty of Medicine.
Directed an initiative that sent >1,800 medical textbooks and laboratory equipment to Al-Beeruny Medical School in Gul Bahar, Afghanistan.

2003–2005 **Program Director** and **Mentor**, the St. Felix Mentorship Program, University of Toronto
A program coordinated by medical students to mentor underprivileged children in the Alexandra Park housing project. Encouraged self-confidence and self-esteem through fun and activities, and facilitated positive one-on-one and group interactions.

2004 **HIV/AIDS Clinic Volunteer**, Familias Saludables, Roatan, Honduras
A non-government agency that offers HIV education, testing and counseling, as well as support for HIV positive individuals, in Honduras' Bay Islands.

2003–2004 **Therapeutic Listener**, Therapeutic Communications Program, University of Toronto
A Department of Psychiatry program where a medical student joins in weekly sessions with someone from the community who wants to discuss an issue in his/her life.

2001–2003 **Telephone Volunteer**, Toronto Distress Centre
Provided emotional support, crisis intervention, and suicide prevention to people who called in requesting help.

2000–2002 **Teaching Assistant**, Departments of Zoology and Statistics, University of Toronto
Worked as a teacher, laboratory demonstrator, and evaluator in three courses and was commended as an outstanding instructor, based on student reviews.

2000–2002 **Volunteer**, "Out of the Cold" program, Calvary Church, Toronto
A volunteer service that prepares and serves meals to the homeless and under-housed.

HOBBIES AND INTERESTS

Cycling Street cycling, and an enthusiastic beginner on trails.

Aquatics Long-distance swimming, and scuba diving with PADI open water certification.

Gardening Particularly keen on herbs, heritage vegetables, and organic methods.

Spanish Speak intermediate-level Spanish.

Backpacking Peru, Ecuador, Honduras, El Salvador, Guatemala, Mexico, Europe, and others

John Doe

2-95 Lippincott St., Toronto, Ontario M5S 2T8

john.doe@utoronto.ca

(416) 978-0164

EDUCATION

- 2003–2005** **Enrolled in the Doctor of Medicine program**, University of Toronto.
Expected graduation: May 2007
- 2002–2003** **Enrolled in the Doctor of Optometry program**, University of Waterloo.
Withdrew to pursue medical studies
- 1998–2002** **Bachelor of Science**, Queen's University.
Honours Life Sciences

CLINICAL ELECTIVES

- 2007** **Nephrology**, Sunnybrook Health Sciences Centre, Toronto, Ontario (proposed)
Supervisor: Dr. Sheldon Tobe
- 2006** **Critical Care**, Toronto Western Hospital, Toronto, Ontario (proposed)
Supervisor: Dr. G. McGuire
- 2006** **Emergency Medicine**, University Health Network, Toronto, Ontario (proposed)
Supervisor: Dr. Peter Glazier
- 2006** **Anesthesia**, St. Michael's Hospital, Toronto, Ontario (2 weeks)
Supervisor: Dr. Ken Lin
- 2006** **Geriatric Medicine**, Vancouver General Hospital, Vancouver, British Columbia (3 weeks)
Supervisor: Dr. Roger Wong
- 2006** **Anesthesia**, Vancouver General Hospital, Vancouver, British Columbia (3 weeks)
Supervisor: Dr. Jon Harper
- 2006** **Anesthesia**, Ottawa Civic Hospital, Ottawa, Ontario (2 weeks)
Supervisor: Dr. Desiree Persaud
- 2006** **Anesthesia**, Victoria Hospital, London, Ontario (2 weeks)
Supervisor: Dr. Rooney Gverzdys
- 2005** **Anesthesia**, St Joseph's Health Centre, London, Ontario (3 weeks)
Supervisor: Dr. John Parkin
- 2005** **Intensive Care**, University Hospital, London, Ontario (1 week)
Supervisor: Dr. Jeff Granton
- 2004** **Rural Family Medicine**, New Liskard, Ontario (4 weeks)
Supervisor: Dr. Peter Hutton-Czapski

HONOUR AND AWARDS

- 2003–2006** **Honours Standing, Years I, II, III**
Faculty of Medicine, University of Toronto.
- 2005–2006** **Class of 1999 James Paul Marois Memorial Award.** Faculty of Medicine, University of Toronto.
Awarded for academic excellence and promotion of social justice, humanitarianism, and community involvement.
- 2002** **First Class Honours,** Faculty of Arts and Sciences. Queen's University.
Convocation.
- 1998–2002** **Dean's Honours List,** Faculty of Arts and Sciences. Queen's University.

RESEARCH

- 2003** **Research Assistant, Department of Vision Science, University of Toronto**
Supervisor: Dr. John Flanagan
"The role of NOS-2 in the development of glaucoma: an in-vitro stretch model."
- 2002** **Research Assistant, Joslin Diabetes Center, Harvard University**
Supervisor: Dr. Jake Kushner
"The relationship between PTEN and insulin growth factor in regulating pancreatic islet function using a knock-out mouse diabetic model."
- 2001** **Research Assistant, St Joseph's Health Centre, UWO**
Supervisor: Dr. Tom McDonald
"Database development for a thyroid cancer registry."

PRESENTATIONS

- Do J.** Therapy for weight loss in olanzapine treatment of schizophrenia. University of Toronto Family Medicine Clerkship Presentations. March 22, 2006. St. Michael's Hospital.
- Do J,** Nyhof-Young, J, Halpin P. Evaluation of a medication safety pamphlet at the University Health Network. Determinants of Community Health 2 Project Presentations. April 21, 2004. Toronto General Hospital.
- Do J,** MacIntosh B. Why the Ontario government should ban block fees: presentation to The Standing Committee on Justice and Social Policy. Monday February 23, 2004. Legislative Assembly of Ontario. Toronto, Ontario.
- Do J.** PTEN knockout rescues pancreatic islet function in IRS-2 deficient mice. Joslin Diabetes Center Laboratory Presentations. August 9, 2002. Harvard University. Boston, Massachusetts.

COMMUNITY INVOLVEMENT AND LEADERSHIP***A) Faculty of Medicine, University of Toronto***

- 2005–2006** **Elected representative**, Financial Aid Committee, Faculty of Medicine. Class of 2007 representative to committee that investigates current guidelines of bursary allocation
- 2005** **Speaker**, Faculty of Medicine, Wightman-Berris Academy Clerkship Information Session
- 2003–2006** **Chair and Founder**, Student Medical Reform Group, University of Toronto
Founded organization to promote social justice within the framework of the Canadian healthcare system
- 2004–2005** **Volunteer researcher**, Medical Students for Injured Workers
Investigated medical claims for a legal aid law firm
- 2004–2005** **Director for Medicine**, Student Administrative Council, Board of Directors
Represented the Faculty of Medicine to the SAC at the University of Toronto
- 2004** **Reviewer**, Admission Selection Committee, Faculty of Medicine
- 2004** **Student Representative**, Ontario Medical Association, Queen's Park Medical Day

B) Miscellaneous

- 2005** **Medical student volunteer**, Buduburam refugee camp, Ghana, West Africa.
Performed vision assessment and ocular pathology screening for 6 weeks
- 2004–2005** **Volunteer**, Out of the Cold Program, Faculty of Medicine. A service organized by medical students to prepare and deliver food to the homeless in downtown Toronto
- 2004** **Volunteer**, The Great Sleepout, Queen's Park Legislature. Program to raise awareness about homelessness in Ontario
- 2003–2006** **Steering committee member**, Medical Reform Group of Ontario. Physician organization that promotes health equity and policy on a national level
- 2002–2003** **Class president**, Optometry, University of Waterloo
- 2001–2002** **Volunteer**, Martha's Table Community Soup Kitchen, Kingston. Biweekly preparation of meals for those in need
- 1998–2002** **Executive Member**, Queen's Amnesty International. Involved in organization and administration of Kingston chapter of Amnesty International
- 1998–2002** **Mentor**, Kaleidoscope Child Mentoring Program. Academic and non-academic guidance for children from disadvantaged background
- 1997–1998** **Volunteer**, Mt Hope Hospital and Home. Recreational program for geriatric inpatients
- 1995–1996** **Volunteer**, Dept. of Radiology, St. Joseph's Healthcare Centre

INTERESTS AND ATHLETICS

- 2005** **Ottawa Marathon**
- 2005** **Hamilton 30 Km Around the Bay run**
- 2004–2006** **Rock Climbing**
- 2004** **Forest City Half-Marathon**
- 2004** **Medgames Participant**, University of Montreal
- 2003, 2006** **World Crokinole Championships**, participant. Tavistock, Ontario
- 1996–2006** **Scuba Diving**. PADI certified. Various locations including Caribbean, Red Sea, Southeast Asia
- 1996–2006** **Travel**. Various locations including Thailand, Cambodia, Vietnam, Laos, Spain, England, Italy, Ghana, Israel, Jordan

Example #3 of a successful CV

Peter Piper

742 Bay Street, #912

Toronto, Ontario

M5G 2H4

416-352-7195

peter.piper@utoronto.ca

Education

- 2003–2007** **Doctor of Medicine**, University of Toronto
(Expected)
- 2000–2003** **Bachelor of Science with Distinction in Life Sciences**
Queen's University, Kingston, Ontario

Awards and Honors

- 2006** **Elected to the Alpha Omega Alpha Honor Medical Society**, University of Toronto. In recognition of academic excellence
- 2005, 2006** **Dr. C.S. Wainwright Memorial Scholarship**, University of Toronto. High academic standing in each of the second and third years of medical school

2004	Walter F. Watkin Scholarship , University of Toronto High academic standing in the first year of medical school
2004	Summer Student Research Scholarship , University of Toronto. Funding for medical student summer research in the medical sciences
2003	Drs. Ann and Carl Witus Award , University of Toronto Awarded to students with high academic standing in their premedical studies
2003	John D. Schultz Science Student Scholarship , Heart and Stroke Foundation of Ontario. Summer research funding awarded to students with high academic standing
2001–2003	Dean's Honor List with Distinction , Queen's University Recognizing students ranking in the top 3% of the Faculty of Arts and Science
2002	Queen's Appeal Undergraduate Scholarship , Queen's University. Awarded for academic excellence
2001, 2002	James H. Rattray Scholarship in Science , Queen's University. In recognition for high academic standing in a science program

Medical Electives

2007	Nephrology (3 weeks – proposed) Dr. Sheldon Tobe, St. Michael's Hospital, Toronto, Ontario
2007	Internal Medicine (3 weeks – proposed) University of Western Ontario, London, Ontario
2006	Gastroenterology (2 weeks) Dr. Robert Goodacre, St. Joseph's Hospital, Hamilton, Ontario
2006	General Internal Medicine (2 weeks) Dr. Herbert Ho Ping Kong, Toronto Western Hospital, Toronto, Ontario
2006	Family Medicine (2 weeks) Dr. Audrey Karlinsky, Wellpoint Family Practice, Toronto, Ontario
2006	Emergency Medicine (3 weeks) Dr. Dan Cass, St. Michael's Hospital, Toronto, Ontario
2006	Internal Medicine – Consultation Service (3 weeks) Dr. Yuna Lee, Dr. Ophyr Mourad and Dr. Peter Kopplin St. Michael's Hospital, Toronto, Ontario
2005	Team Internal Medicine (3 weeks) Dr. Kumanan Wilson, Toronto General Hospital, Toronto, Ontario
2005	Neurology – Inpatient/Consultation Service (2 weeks) Dr. Marika Hohol, St. Michael's Hospital, Toronto, Ontario

Research Experience

- 2005–Present **The attitudes of physicians and medical students towards working through a respiratory tract infection.**
Role: Primary Researcher
Supervisor: Dr. Allan Detsky, Physician-in-Chief, Mount Sinai Hospital, Toronto, Ontario
- 2004–2005 **The barriers to stroke survivors accessing ambulatory stroke rehabilitation services in the greater Toronto area.**
Role: Determinants of Community Health 2 Project
Supervisor: Mary-Ann Neary, Clinical Director, Krembil Neuroscience Program, University Health Network, Toronto, Ontario
- 2004 **The role of toll-like receptor convergence signaling proteins MYD-88 and IRAK-4 in viral myocarditis leading to heart failure.**
Role: Summer Medical Student Researcher
Supervisor: Dr. Peter Liu, Division of Cardiology, Toronto General Hospital Research Institute, Heart and Stroke/Richard Lewar Centre of Excellence, Toronto, Ontario
- 2003 **Development of a candidate polyvalent DNA vaccine against Coxsackievirus B induced myocarditis.**
Role: Summer Student Researcher
Supervisor: Dr. Peter Liu, Division of Cardiology, Toronto General Hospital Research Institute, Heart and Stroke/Richard Lewar Centre of Excellence, Toronto, Ontario

Abstracts and Presentations

Piper P, Fuse K, Liu Y, Chan G, Liu P. The role of toll-like receptor convergence signaling proteins MYD-88 and IRAK-4 in viral myocarditis leading to heart failure (abstract). University of Toronto Medical Journal 2005; 82:S15

- *Poster presented at Medical Student Research Day, University of Toronto, 2005*
- *Poster presented at the AHA Scientific Session, New Orleans, Louisiana, 2004*

Fuse K, Liu Y, **Piper P**, Wen WH, Chen M, Richardson C, Liu P. Protection of mice against Coxsackievirus B3 myocarditis by priming with polyvalent DNA-based vaccine followed by boosting with killed vaccine (abstract). Journal of Cardiac Failure 2004; 10(S1): S55

- *Poster presented at the AHA Scientific Session, New Orleans, Louisiana, 2004*

Piper P, Neary MA, Willems J. The barriers to stroke survivors accessing ambulatory stroke rehabilitation services in the greater Toronto area (presentation). SCRIPT Oversight Committee. Toronto Rehabilitation Institute. Toronto, Ontario. April 26, 2005

Publications

Fuse K, Liu Y, Chan G, **Piper P**, Chen M, Wen CY, Husain M, Sakira B, Liu P. Myeloid differentiation factor-88 plays a crucial role in the pathogenesis of Coxsackievirus B3 induced myocarditis and influences type I interferon production. Circulation 2005; 112: 2276-85

Other Employment Experience

2002–2004	Instructor , Standard First Aid with CPR 'C' Canadian Lifesaving Society
2002–2004	Instructor , Basic Cardiac Life Support Heart and Stroke Foundation
2000–2004	Aquatic Supervisor Town of Richmond Hill
1998–2004	Lifeguard/Swimming Instructor Town of Richmond Hill

Leadership and Community Involvement

2005	Director , Cardiovascular Seminars, UofT Summer Mentorship Program
2005	Director , Saturday Program Medical Workshops, University of Toronto
2004, 2005	Mentor/PBL Leader , Summer Mentorship Program, University of Toronto
2004, 2005	Tutor , Saturday Program, University of Toronto
2004, 2005	Volunteer , Mini-Med School, University of Toronto
2003, 2004	Volunteer , Daily Bread Food Bank
2003, 2004	Volunteer , Toronto International Heart Failure Summit
2004	Volunteer Guest Teacher , Glamorgan Junior Public School. Led a session for grade 5 students on the human body, health and medicine
2004	Interview Group Leader , University of Toronto
2000–2004	Volunteer Examiner , Canadian Lifesaving Society
2003	Charity Runner , Salvation Army Christmas Charity Run

Athletics and Interests

Aquatics

- Captain, Division 1 Intramural Waterpolo Team, 2004 and 2005
- Championship team in 2004 and 2005
- Competitor, Lifeguard Competitions, Canadian Lifesaving Society, 2000–2002
- Competitive Swimmer, North York Aquatic Club, 1989–1999

Intramurals and Clubs

- Captain, Division 2 Intramural Football Team, 2004
- Division 2 Intramural Soccer Team, 2004
- Rock Climbing Club, 2003–2004
- Vice-President and Member, Queen's University Tae Kwon Do Club, 2000–2003

Other Sports

- Avid golfer and tennis player

Arts

- Principal Cast Member, “The Foreigner” Stage Production, 1999
- Piano, Royal Conservatory of Music, 1990–1999

Travel

- United Kingdom, France, Italy, Austria, Germany, Trinidad

H-4**PREPARING FOR THE INTERVIEW**

Most interviews will be held in late January and early February over a three week time span. Some programs interview applicants from within their province at times different from out-of-province applicants. Most programs will contact you in January. Some may contact you by phone so it is important to have an answering machine at that time. Other programs may contact you by email or by mail.

Goals of the Interview

The residency interview is a critical stage in the process of residency selection. All the months of tedious paperwork and preparation finally reward you with the chance to find out how the programs on your list actually compare with one another.

The purpose of the interview from the perspectives of both the residency candidate and interviewer(s) is multi-fold:

- › You are attempting to assess how compatible you are with the program, how comfortable you feel, and how well the program meets your stated goals.
- › You are also trying to convey your sense of compatibility with the program to your interviewers. This goes beyond just making a good impression. In a sense, during your interview you are “trying the program on” or demonstrating to the faculty and residents of the program that you would be a welcome addition to their ranks. Indeed, you may want to think of your interview as an exercise in role-playing, with you in the role of a recently matched resident in that program.
- › Role-playing is not the same as acting. In your eagerness to charm and impress your interviewers, you must be careful to avoid insincerity. Your interviewers want to find out who you really are. It doesn’t serve anyone’s purpose for you to leave a false impression. It simply makes the interview a waste of everyone’s time, including yours.

- › You are also trying to assess the program’s relative strong points and weak points so that you will be able to structure a well-founded Rank Order List for the Match. Be careful not to let your attention to this last purpose obscure the need to attend to the first two. The residency candidate who has completed all three purposes has had a very successful interview.
- › Your interviewers also have several purposes in mind during the course of an interview. They seek to confirm and expand on the information you provided in your application. They are also trying to determine how compatible you would be with the residents and faculty in the program. Just as you are trying to put your best foot forward, the representatives of the residency program want to show you their program in the best possible light. However, again, it is ultimately not in the best interest of the program to paint a misleading picture. Lastly, like you, your interviewers are attempting to develop some criteria or create a Rank Order List of their candidates for the Match.

In short, the residency interview is a delicate and complicated interaction that adds substance to the selection process for both the candidates and programs.

Interview “Musts”

Your CV and cover letter got you an interview. Now what? If you’re lucky, you’ll have some time to prepare, but even if you only have a few hours before the interview, don’t panic! Reduced to the essentials, interview preparation consists of just three things:

- 1. Know yourself. Know what you have to offer.** Your education, your interests, and your experiences have given you a wide range of skills. Be able to articulate the skills you have, how you developed them, and how you have used them.
- 2. Know the position you are interviewing for.** Be able to relate your skills to the duties and responsibilities of the job.

3. Know the organization. Research! Research! Research! Try to go beyond the obvious, easy-to-find information about the organization and its needs. Here are some guidelines to help you in your research:

- › What options does the hospital offer?
- › What have they done? (get a sense of its history)
- › Where are they headed? (objectives, strategy)
- › How would this hospital define success?
- › What are the organization's values? (look for their mission statement)
- › What is the outlook for the future?
- › What things affect the practice of medicine?

Once you have done the research, prepare for the interview by anticipating the sorts of questions you may be asked and rehearsing your responses.

Interview Preparation Pearls

Just before the interview, take the time again to review the information you've received from the program and any material you may have gathered from other sources.

Write down the "facts" that you want to double-check as well as any initial impressions you may have formed based on the written material. Pay special attention to the names and positions of people you are likely to meet. You can actually find out a fair amount about the surrounding community before you arrive by checking some resources in your current location such as your local library. Newspapers from that community can tell you about job opportunities for your spouse/significant other, cultural offerings, the housing market, community problems, etc.

Remind yourself of the specific questions you had about this program and write them down in a convenient place so that you will be sure to ask them. It's a good idea to have some interesting questions prepared ahead of time to let your interviewers know that you've really given some thought to the qualities of their particular program. Interviewers get tired of answering the same questions, just as you do, so try to think of a few that reflect your own special interests.

You may have already formulated a list of standard questions that you want to ask every program for comparison, or you may have developed a checklist of program characteristics to fill out in each interview.

Format of the Interview

Interviews don't come in one standard format. There are panel interviews, stress interviews, interviews over meals, telephone interviews. Ask what format your interview will follow and who will be conducting it. In most interviews, however, regardless of the format, there is a common underlying structure and the questions you may be asked tend to fall into one of several general categories. It's not possible to list all potential interview questions, but here are some examples of the types of questions you may encounter:

A) The Icebreaker and Introduction

Good interviewers want you to be comfortable and relaxed. To establish this sort of atmosphere, they will ask you a few rapport-building or "small talk" questions (the weather, parking

difficulties, current events in the news). For example, "Did you have any trouble finding our offices?"

B) Questions About You

You will be asked general questions about your skills and experiences. For example:

- › How would you describe yourself?
- › Why did you choose this specialty?
- › Why did you apply to this residency program?
- › What are your major strengths/weaknesses?
- › What kind of environment do you work best in?
- › Where did you do your electives and why?
- › What did you like best about your summer job at XYZ Company?
- › What are your career goals?
- › What do you think it takes to be successful in a job?
- › Do you work well under pressure?
- › Why are you interested in doing your residency here?
- › Do you consider yourself a team player? Give us an example.
- › What do you do in your spare time?
- › How do you feel the present political situation will affect your future?
- › What skills do you have that will contribute to this program?
- › What will you do if you don't get into...?

C) Actual Interview Questions

(* = most frequently asked)

1. *Why do you want to go into this specialty?
2. *Why did you become a doctor?
3. *Tell me/us about yourself. *How would you describe yourself?
4. Describe your personal interests.
5. *How would your friends describe you?
6. *List your strengths.
7. *List your weaknesses.
8. *Tell us about your research.
9. Tell us about a situation in which you overcame adversity.
10. *Tell us about an interesting case you have seen.
11. *Describe a patient who influenced you in school/a patient you learned the most from.
12. What is your inspiration?
13. *Whom do you depend upon for support?
14. *Why are you interested in this program?
15. *Why did you not rotate here?
16. *Tell me/us a joke.
17. *What are your overall career goals/where do you see yourself in 10 years?
18. Do you think this particular field is overloaded?
19. What are the negative/positive features of this specialty? Challenges faced by the specialty?
20. *What do you think you can contribute to this program?
21. *What do you want to know about this program?
22. *What do you do in your spare time?

23. What was the last book you read that wasn't a medical book?
24. How will you balance your professional/personal life? Do you perceive any problems?
25. *Why should we pick you?
26. *Do you want to do research? A fellowship?
27. What is one event you are proudest of in your life?
28. How would you redesign the health-care system?
29. What do you think is the future of medicine?
30. Be prepared to discuss ethical issues/political issues/evidence-based issues (i.e., you are on call and your attending, who is scrubbing in, is drunk)
31. How will you deal with the possibility of being sued?
32. What was your most difficult situation in medical school?

D) Questions to Ask During Interviews

1. What paths have most of your recent graduates taken following completion of their training?
2. What are you looking for in a candidate (and how might I fit into your program)?
3. Do you feel that the volume of patients seen on the inpatient and outpatient basis provides an appropriate load per resident?
4. Can you describe the structure of your clinics and the residents' role?
5. How did your residents do on this year's in-service examination?
6. What major changes are anticipated in the department and/or medical centre, and in what direction is the program headed?
7. How would you assess the level of camaraderie among the residents?
8. What elective opportunities are available to your residents?

The bottom line in the interview is that you have to sell yourself. Key personality traits sought by interviewers to keep in mind: drive, motivation, communication skills, energy, determination, confidence, reliability, honesty/integrity, pride, dedication, analytical skills, listening skills. You can include these "key words" in your personal statement and in your responses during the interview.

Before you answer each question, take a moment to compose yourself and think about what skills the interviewer is really looking for (they may not always ask direct questions). When you answer the question, try to offer an example of a situation in which you have had to use or develop that skill. If you lack direct experience, think of other situations in which you have had to use related skills. No one expects a recent graduate to know it all. Demonstrating related experience you can draw from and build on will leave a good impression.

Remember, interviewers are also looking for things such as confidence and poise, personality traits, presentation, the ability to think quickly, level of energy and drive, resourcefulness, and so on. Those other critical aspects will help them determine your suitability or "fit" with the organization.

A very easy way to convey your interest in the program is to say so. Program Directors who are told that you want to come to their program rank you favourably. Reinforcing your interest and suitability for the program puts you in even better stead.

E) Behavioural Questions

This type of question is asked more frequently in interviews. Interviewers will want to determine how you react in certain situations—situations that could occur in the position you are interviewing for. As more and more organizations move toward employees working together in teams, you likely also will be asked to describe situations in which you have developed or used teamwork skills.

You can be certain to encounter one or two of these types of questions. Sometimes whole interviews revolve around this style of questioning.

F) Closure

After the interviewers have asked all of their questions, they will give you a chance to ask some of your own. This is your chance to ask thoughtful, intelligent questions that involve the interviewers in discussion and reflect how in-depth your research has been, and a further opportunity to articulate why you are the best person for the position. Be sure to have some questions in mind before the interview in case you can't think of one during the interview.

Structure and Content

Often, the residency program will have prepared an itinerary for you listing the names of the people you are going to talk to and how much time is allotted for each person, which is generally 20 to 30 minutes. In addition to the Program Director, you want to have a chance to talk with other faculty members, residents from different levels of training, and any other individual with whom you would have significant contact as a resident in that program. In terms of location, you want to have a chance to see both the hospital and clinic facilities during your interview. If there is free time, it would be in your best interest to spend it in places where there are residents, so you can get a better feel for the actual working environment.

Decide ahead of time which questions you want to ask of which type of person (e.g., a question about the details of the call schedule might be reserved for the chief resident). On the other hand, there may be some questions you will want to ask of everyone to see if there is any discrepancy, such as a question about the attending and resident interactions.

Avoid dominating the conversation, but try to be an active participant in the interviewing process so that your interviewer will have a sense of your interest in the program and your ability to formulate good questions. Be prepared for different interviewing styles and adjust accordingly.

Prohibited Questions

There are certain questions that you do not have to answer by protection of federal law. It is illegal to make employment decisions on the basis of race, colour, sex, age, religion, national origin, or disability. To avoid charges of discrimination based on any of these protected classes, many employers do not ask questions during an employment interview that would elicit this type of information.

Discussion of Parental Leave, Pregnancy, and Child-Rearing Plans

A frequent area of concern during the interview process is questions related to parental leave, pregnancy and child-rearing plans. The prohibition against discrimination on the basis of sex includes discrimination on the basis of pregnancy and

child-rearing plans. You do not have to answer questions related to marital status, number of children, or plans to have children, but you may want to prompt a discussion of the provisions for maternity/paternity leave and/or child care responsibilities in the residency program.

Scheduling

You will hear some differences of opinion as to whether it is better to be one of the first candidates a program sees, in the middle, or one of the last. Since there is no reliable data to conclude that interviewing order makes a difference, and since you don't have complete control over when you interview, try not to worry about it.

There is general agreement, however, that you should schedule the interview for your most highly valued program after you have had some experience with one or two interviews in other programs.

Generally speaking, an interview will take one full day. If your travel schedule permits, try to allow some time to tour the community outside the program and/or spend some informal time with residents or faculty.

If your spouse or significant other will be accompanying you on your interviews, you may want to schedule additional time to assess other aspects of the program and community important to him/her. In general, spouses and significant others are welcome to participate in the interview process, but you should clarify this with the program ahead of time so that the schedule can be structured to accommodate this. Some programs specifically provide for the participation of spouses and significant others with organized tours of the community, etc.

Attitude

Try to keep in mind your goals for the interview in order to establish the right frame of mind. Again, you want to project a positive, confident, and enthusiastic demeanour without being overbearing or insincere.

If you keep in mind that the interviewers have their own agendas to fulfill, you won't be dismayed or intimidated by the tougher questions that try to find out more about you. In fact, if you've thought about what the interviewers are trying to get out of the interview, you will have already anticipated their questions and have a well-thought-out answer ready.

Try to be open and honest. It's okay to be nervous, just don't let your nervousness hide your personality.

Other Tips

- › In terms of appearance, the general advice is to be neat and comfortable. Use your own judgment as to whether an expensive suit would add to your confidence level or compete with your personality.
- › Be on time. Better yet, be early. Allow yourself time for finding a parking space, getting to know your surroundings, catching your breath, and arriving in place before the appointed hour.
- › Before you leave the house, make sure you have everything you need for the interview, such as your notes, paper and pen, and an extra copy of your CV, personal letter, etc.

- › Do a practice interview first with someone you know acting as the interviewer. This will give you a chance to rehearse possible answers.
- › During the interview, you will be judged on your presentation skills and how effectively you communicate. Make frequent eye contact, smile, and dress appropriately.
- › Talk with residents at various institutions about the programs. Here are some key topics to ask them questions about.
 - Would you choose this program again?
 - Level of spirit and camaraderie? Competition among residents?
 - Faculty?
 - Is conference leave funded, is there support for research, etc.?
- › Have questions to ask them at the end of your interview, such as:
 - What are the strengths and weaknesses of this program?
 - What path do the majority of your graduates take after their training: Urban? Rural? Academic?
 - What changes do you anticipate in the next five years?
 - What are the opportunities for research?
 - Is there protected academic time (a Royal College requirement)?
 - What is the size, diversity of case mix, and type of patient population?
- › Remember to send thank-you letters to the directors within 48 hours. Keep them business-like and brief. Some suggest sending a picture with the card. Add any relevant information that you forgot to mention in the interview.
- › In order for you to rank the institution best suited to you, take notes of the strengths and weaknesses of the programs and what impressed you. Would you enjoy spending two to five years there? You will find your notes helpful in completing your ranking for the Match.

About the Match

The matching process (both Canadian and American) is a comparison — using a computer program — of applicants' ranked choices of programs and Program Directors' ranked choices of candidates. The ranking forms are the only determinants of offers and acceptances of postgraduate year 1 (PGY1) spaces. Each registrant submits a list of preferred programs, while each Program Director submits a list of preferred candidates. These lists are entered into the Canadian Residency Match (CaRMS) or the National Residency Match Program (NRMP) computer in the United States, which perform "the Match" based on a mathematical algorithm. There are some American positions that fall out of the Match, and we will provide you with further information later in this chapter.

An applicant may be matched with the highest choice on his/her Final Ranking Form, provided the program also chooses that applicant before its spaces are filled by applicants whom it ranked higher.

The results of the matching process are released by mail to applicants and Program Directors in March. All rankings submitted by applicants and programs are confidential.

Applicants who remain unmatched after the first iteration of the Match are eligible to be registered in the second iteration at no charge. However, applications to the second iteration programs must be resubmitted when the positions available are announced.

In early June, the Office of Student Affairs will provide you with application material for the Canadian Residency Match forwarded by CaRMS to all medical schools. Student Affairs will also request information on the NRMP Match for those interested in applying to the United States. About 10% of students apply to both matches, as a back-up plan for competitive programs such as Dermatology, Neurology, Ophthalmology, and Surgery specialties that offer one to three spots in their programs.

Common Mistakes

Common mistakes that students make when going through the Match process include the following:

- › Not understanding the details of the Match for a particular specialty
- › Starting the application process too late
- › Applying to or ranking too few programs to ensure a match
- › Letting the application paperwork overwhelm you
- › Not paying attention to deadlines
- › Submitting a weak personal statement and CV
- › Not knowing what to look for in a residency training program
- › Preparing inadequately for residency interviews
- › Ranking programs on the basis of probability of acceptance rather than desirability
- › Panicking after failing to match, rather than strategizing during the second iteration

Principles of the Match

The following example illustrates how the Match may best be used by all parties to prepare Rank Order Lists, and how the matching algorithm works.

Applicants' Rank Order Lists

Eight applicants are applying to four programs. After considering the relative desirability of each program, the applicants submit the following Rank Order Lists to CaRMS or NRMP:

Anderson	1. City	
Brown	1. City	2. Mercy
Carpenter	1. City	2. Mercy
Davis	1. City	2. Mercy
	3. General	4. State
Eastman	1. City	2. Mercy
	3. State	4. General

Ford	1. City	2. General
	3. Mercy	4. State
Goodman	1. City	2. Mercy
	3. State	4. General
Higgins	1. State	2. City
	3. Mercy	4. General

Applicant Anderson makes only a single choice, City, because he is under the impression from remarks made by the Program Director that he would be ranked very highly, and he had in turn assured the director that he would rank City number one. It is acceptable for programs to express a high level of interest in applicants to recruit them into their program and for applicants to say that they prefer one program to others. The applicant, however, should not consider such expressions as commitments.

Applicant Brown ranks only the two programs that were desired by every applicant — Mercy and City. He is considered top of his class, and feels that he is a most desirable applicant. However, he has not been assured of a match with either of these programs. Applicants should consider ranking all programs that they are willing to attend to reduce the likelihood of not being matched. It is better to accept a less desirable choice and match to it in the first round than take your chances of being unmatched and then have to pick from what's left over for the second Match. What's more, you will be competing for those leftovers with foreign students and re-entry applicants. If, however, you are also applying to the NRMP, then only ranking those programs you really want to go to and "falling back" on the U.S. Match is an appropriate strategy.

Applicant Carpenter ranks City, which she prefers, and Mercy. Standing first in her class in her junior year, she knows that she is a desirable applicant, and she has been assured by the Program Director at Mercy that she will be ranked first. She is certain Mercy will, in fact, rank her first, and therefore believes there is little risk of her being left unmatched even if she does not rank additional programs. Again, although she is certain, there is little risk to ranking programs that she still finds acceptable unless she has better programs ranked in the United States.

Applicant Ford would be very pleased to be at State, where she had a very good clerkship, and feels that they will rank her high on their list. Although she does not think she has much of a chance, she prefers City, General, or Mercy, so she ranks them higher. There is no risk ranking programs that you want most at the top of your list, even though you feel you may not have an excellent chance. You will be ranked to the highest ranked program that also has a position for you.

Applicant Higgins is equally sure he will be offered a position at State, but he prefers the other programs. He ranks State first because he is afraid that State might fill its positions with others if he does not place it first on his list. Applicants should rank programs in order of preference. Their choices should not be influenced by speculations about whether a program will rank them high, low, or not at all. The position of a program on an applicant's Rank Order List will not affect the applicant's position on the program's Rank Order List, and therefore it will

not affect the likelihood of the applicant's receiving an offer from the program. During the Matching process, an applicant who receives an offer from a program that the applicant has ranked is removed from that program's roster of filled positions only if a match to a program higher on the applicant's Rank Order List becomes available. Therefore, rank number one should be the applicant's most preferred choice.

Applicants Davis, Eastman, and Goodman have interviewed at the same programs. Like the other applicants, they desire a position at City or Mercy and rank these programs either first or second, depending on preference. However, since they are not assured of a match to either of these desirable programs, these applicants also list State and General, which they are willing to attend if matched, lower on their Rank Order Lists. They are using the computer match well.

Programs' Rank Order Lists

Two positions are available at each program. The four programs, having determined their preferences for the eight applicants, also submit Rank Order Lists to CaRMS or NRMP.

The Program Director at Mercy Hospital ranks only two applicants, Carpenter and Goodman, for his two positions, although several more are acceptable. He has insisted that all applicants tell him exactly how they will rank his program, and both of these applicants have assured him they will rank his program very highly. He delights in telling his peers at national meetings that he never has to "go far down his Rank Order List" to fill his positions. The advantage of a matching program is that decisions about reference can be made in private and without pressure. Both applicants and programs may try to influence decisions in their favour, but neither can force the other to make a binding commitment before the Match. The final preferences of Program Directors and applicants as reflected on the submitted Rank Order Lists will determine the offering of positions and the placement of applicants.

Mercy	City	General	State
1. Carpenter	1. Goodman	1. Brown	1. Brown
2. Goodman	2. Higgins	2. Eastman	2. Eastman
	3. Eastman	3. Higgins	3. Anderson
	4. Anderson	4. Anderson	4. Carpenter
	5. Brown	5. Carpenter	5. Higgins
	6. Carpenter	6. Davis	6. Ford
	7. Davis	7. Goodman	7. Davis
	8. Ford		8. Goodman

The Program Director at State feels that his program is not most desirable to most of the applicants, but that he has a good chance of matching Ford and Higgins. Instead of ranking these two applicants at the top of his list, however, he ranks other applicants higher. He also ranks all of the acceptable applicants to his program. He is using the Match well.

The Program Directors at City and General have participated in the matching process before. They include all acceptable applicants on their Rank Order Lists with the most preferred ranked highest. These Program Directors are not concerned about filling their available positions within the first two ranks. They prefer to try to match with the strongest, most desirable candidates. They are using the Match to maximum advantage.

The Matching Algorithm

The matching algorithm simulates the offer and acceptance process based on the Rank Order Lists submitted by programs and applicants. Each program first makes offers to the applicants

ranked as most preferred on the program's list, up to the number of positions available in each program. If the applicant also ranks the program on his or her Rank Order List, a "tentative" match is made. Any applicant who receives multiple offers is tentatively matched to the offering program ranked as most preferred on the applicant's list, and any offers from less preferred programs are rejected. Any programs that receive such rejections then make a corresponding number of additional offers to applicants, in the order of preference indicated on the program's Rank Order List, to fill available positions. Again, applicants with more than one offer tentatively accept the most preferred offer and reject any less preferred. The process repeats until all positions are filled (there are no rejections) or all offers have been made. Each program thus offers positions "down" its Rank Order List until its positions are filled or there are no more acceptable applicants. Each applicant accepts positions "up" his or her Rank Order List until the applicant is matched to the most preferred program that offers him or her a position.

Through matching, applicants would match into the program listed highest on their lists that had available positions. The positions in each program are first offered to those applicants with the highest rank.

Match Strategies

- › It is possible not to get the position you want; however, there is an excellent chance that you will get one of your top three choices. In 2000, over 80% of Canadians were matched to one of their top three choices of programs. It is possible not to match after the Match (6% of Canadian grads), but there are some simple guidelines that can help to ensure the best possible match for you.
- › Don't overestimate yourself. No matter how sure you are that you will match with your top choice, you cannot be penalized for listing additional programs. Those applicants who list only one or two programs are much more likely not to match.
- › Don't underestimate yourself. Again, you are not penalized for listing programs that you consider a long shot. Even if you don't think you have much of a chance, if you really want to go somewhere, go ahead and rank it first.
- › Remember, when first weighing the programs in terms of your preference, some may seem fairly equivalent to you. If you take the time to evaluate these carefully, you may discover reasons why you should rank one program over another. The Match computer is fair, but it is also ruthless. If you rank one program above another, it will put you in the first program it can without stopping to consider that maybe geographic location is more important to you than a higher faculty-to-resident ratio.
- › Program Directors violate residency rules if they coerce students to rank a program first or attempt to force the signing of a contract prior to the release of Match results.
- › Failure to list enough choices on the Rank Order List is by far the most common reason why a student will fail to match. Do not accept oral statements from programs that they will rank you highly as proof that you will match to them. They may have more highly competitive candidates than they have slots to fill. Take all such pre-Match assurances from programs with a grain of salt. The question of whether or not you will match is usually on the minds of all senior medical students until Match day. The following information is provided in the event that this should happen.
- › Written offers are sometimes made. It contravenes CaRMS rules to make such an offer for Ministry of Health-funded

positions, but sometimes spots can be specially funded by external bodies, such as Cancer Care Ontario for a Radiation Oncology position. This circumstance is certainly an exception

and you should take whatever steps necessary to protect yourself. Have your lawyer review the contract to ensure that it is legally binding before you pull yourself from the Match.

H-6 THE COUPLES' MATCH

This information is helpful to couples applying to CaRMS or the NRMP.

Applicants who wish to match to the same geographic location can link their program choices together as a couple so that they can be matched into a combination of programs suited to their needs. In creating pairs of program choices on their Rank Order Lists, couples can mix specialties and geographic locations.

Applicants should seriously consider the career implications of submitting a couple's Rank Order List before signing the couples contract. By pairing their choices, couples are restricting their individual chances of a successful match to their career preferences by making it conditional on their partners' Match results.

The Couples' Match is a useful strategy that any two people, like Lindsey and Rob from Case 1, can use to try to match to the same location.

Applicants notify CaRMS that they are participating as a couple by completing the reverse side of both partners' Student Agreement. The decision to participate as a couple need not be made until the time of the submission of the Rank Order List; however, both parties must contact CaRMS to get the appropriate instructions and Rank Order List by February 1. Whether applicants are applying as a couple may not influence the selection decisions made by Program Directors. Neither CaRMS nor NRMP will identify couples to Program Directors.

Each member of the couple signs up for the Match individually, but instead of submitting a Rank Order List in March with single entries on it, the couple submits a "Paired Choice List" with the preferences of each partner tied together. This way, the couple can correlate their preferences; both partners' first choices can be in Halifax, their second choices in Toronto, and so on. In order for the couple to match successfully, both partners' preferences have to match. For example, if "Partner A" of the couple matches with her first choice program but "Partner B" does not, the computer program throws out the couple's first-choice grouping and moves down the paired list to the next ranked grouping. This process continues until both partners match.

Some couples try to match for the same geographical area, some for the same hospital, and some even for the same specialty. This need not only be restricted to couples who are married but anyone who wants to link up with someone else. This may include friends, kin, or others in serious relationships.

The first step is to decide to what programs you and your partner want to apply. If one of you is more or less competitive for your respective specialty choice than the other, then this must be taken into account, especially when applying to the more competitive residency programs. You should also apply to a greater-than-average number of programs, both to increase

your chances of finding the perfect residency, and your chances of matching. Keep in mind that with a larger number of programs to choose from, it may be easier for you to find a place acceptable to both you and your partner.

Arranging for an interview for two can be a difficult, expensive hassle, but it does not have to be. Ideally, you should both have obtained a list of interview dates offered by your respective programs. Some programs have no specific date, and you can arrange a visit on any day within a specific time frame. Interviews can be arranged so that you can interview at institutions at the same time, thereby saving money. You may have to visit some programs separately. If your respective programs do not have the same interview dates, call the program secretary and try to set up a special interview date that coincides with your partner's. Some will allow this, while others may not. It does not hurt to try, and it could save you some money.

Talk to the program secretary and make sure that she/he is aware you are in the couple's Match. You should also let your interviewers know that your partner is applying to a residency at the same institution. If a program wants you, being in the couple's Match should not affect their ranking of you one way or another. In fact, if you are a desirable candidate, the Program Director will sometimes put in a good word to the director of your partner's program, giving you both a better chance of selection.

Further Thoughts

- › Check out the contract in your package for the Couples' Match.
- › Apply individually to the program you are both interested in. You complete separate applications, with separate resumes, etc.
- › To obtain your match as a couple you both have to apply to your respective specialties. You naturally will have to be accepted into each program to make it through the Match.
- › It gets trickier if you are both applying within the same specialty because the various programs rank you as a couple for their program differently. The CaRMS/NRMP computers enter your Rank Order Lists, and you both have to make the cut-off to get one of your choices. You rank the programs and the programs rank who they want. The computer then figures out the highest combination. This is where you end up being matched. But the programs can shuffle around how they rank the two of you to suit their needs before they submit their rank list of candidates to CaRMS. For example, if the University of Toronto Pediatrics wants the two of you in their program, they take the lower of the two candidates and raise their score/rank up to that of the higher partner.
- › Don't turn down interview invitations because both of you did not get an interview at a particular medical school.

National Defense – The U.S. Independent Match

CaRMS matches applicants funded by National Defense through the regular matching process. Students who have a contractual arrangement with National Defense must identify themselves on the Application for Postgraduate Medical Training. Applicants who are funded through the Medical Officer Training Plan or the Military Medical Training Plan can apply only to Family Medicine programs that are listed on the Applicant's Designation List as being for National Defense-funded applicants only.

Earlier Matches in the United States

For U.S. programs, several fields select residents in January. These fields are Neurology, Neurosurgery, Ophthalmology, Otolaryngology, and Urology. The surgical subspecialties are highly competitive; therefore, a large percentage of applicants go unmatched. However, because the deadline for applications through the National Residency Matching Program is not until February, there is still time for the unmatched applicant to obtain a position through the NRMP.

Early matches for U.S. programs in Neurology, Neurosurgery, Ophthalmology, and Otolaryngology are coordinated by a single agency in California. Your careful attention to deadlines is a must, as they differ from program to program.

The category of “independent applicants” includes several different groups: non-sponsored U.S. graduates, Canadian students/graduates, osteopathic students/graduates, and international medical graduates (IMGs). For information, contact the NRMP at (202) 828-0566 during the summer before the Match to receive the *NRMP Handbook for Independent Applicants*. To enrol, submit a completed Independent Applicant Agreement to the NRMP. The NRMP might also independently verify or request your credentials in order to approve your Match eligibility status. For example, some schools require results of the USMLE steps 1 and 2.

Following registration, you will be assigned an NRMP Applicant Code, which you will use to identify yourself on residency applications and in correspondence. You will also receive a confidential personal identification number (PIN). If you match at a program, your PIN will appear in the *USA Today* newspaper on Unmatch Day (the day before Match Day). The registration deadline is in October before Match Day. Consult the current edition of the *NRMP Handbook for Independent Applicants* for further details.

Like the *NRMP Handbook for Students*, this publication from the NRMP is a must-read for independent applicants. You can get a copy by calling the NRMP at (202) 828-0566. The version for independent applicants covers the same topics as the general student handbook. In addition, the *NRMP Handbook for Independent Applicants* contains guidelines for verification of credentials for Match eligibility, a NRMP publication order form, and match dates for specialties covered in the NRMP's Specialties Matching Services (e.g., Dermatology). The *NRMP Directory* is a catalogue of residency programs, participating

in the Match. Part I of the directory organizes the programs by hospital. Use this section to see what other specialty training programs are offered at the hospitals you're interested in. Part II lists programs by specialty type and is much more useful. You should receive the edition for the previous Match at no cost on registration. You will also receive a revised edition for your Match late in the fall.

Going Unmatched

This is a devastating and anxious time of a student's academic career, so please choose your specialties wisely to avoid the heartache of being unmatched.

Every year, there are a small number of students who do not match. If this happens to you, don't panic. It doesn't mean that you'll never be accepted to a residency program. As you probably read earlier, there could be many reasons you didn't match and, frankly, you'll never know what they are so it's not worth dwelling on. You do have to take immediate action, though.

If your Canadian selections don't match, you'll be notified on “Unmatch Day,” around Monday of the second week in March. Students will be paged to meet with the Associate Deans from Student Affairs and Postgraduate Medical Education. In the case of the U.S. Match, the results come out around the third week in March. The Office of Student Affairs will notify you if you are unmatched.

With the aid of the faculty, the student will receive a list of unmatched positions and will begin to apply to the Match (think of yourself as a brand new applicant; students will have the opportunity to update their CVs, reference letters, and personal statements). You may choose to include old references sent by CaRMS to the Office of Student Affairs. Interviews are normally conducted between March 9 and 18. You may interview on the phone or meet the interviewer in person, giving you an opportunity to sell yourself.

In the case of the U.S. match, the unfilled lists will be sent to the Office of Student Affairs, and students begin to contact the programs directly. After some deliberation, a program will normally accept a student over the phone. Most students are matched within 24 hours of the starting time. It is rare that a student remains unmatched unless he/she chooses.

The CaRMS application files of all students not matched in the first iteration are sent to the Office of Student Affairs. Students not matched in the first iteration are automatically registered (without cost) in the second iteration. To help students consider their choices and apply for the second iteration, CaRMS will send each student, through the school, a list of vacancies available in the second iteration and a Rank Order List for the second iteration.

Rank the programs you have contacted and to which you would like to be matched. They must be listed in order of priority, as you painstakingly did in the first iteration.

Switching Residency

You may not have made the right career choice or not have matched to your preferred choice of specialty. Relax. There is room to make switches once the Match is over.

The first thing you need to do is contact the Postgraduate Office at the respective university you matched to. Note that counseling is held strictly confidential. Each school arranges for both internal matches (within the university) and external matches (Canada-wide). Check with the postgraduate office for respective deadlines.

In a survey on transfer options in postgraduate training, CaRMS identified that all 16 schools have official procedures at the postgraduate office to allow residents to transfer between residency programs. Twelve of the 16 medical schools also offer to arrange transfer to other medical schools. Saskatchewan and three of the Quebec schools (other than McGill) declared that they had no procedures to transfer residents to other medical schools.

Medical schools will try to accommodate transfers between disciplines at any training level. Ottawa, Queen's, and Toronto restrict transfers to PGY1 or PGY2 levels where possible. Manitoba also offers transfers to PGY1 or PGY2.

Section I

CASE STUDIES WITH ANSWERS

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This chapter offers practical advice and case studies to help you set up a realistic budget, manage your money, select insurance, and balance your personal and professional goals.



Lindsey and Rob are fourth-year medical students who plan to get married before starting residency. They want to attend programs in the same location, but don't know if this is possible. They are both 26 years old and are also thinking about having children. They've been to information sessions with residents who have children and heard their classmates talking about the challenges of parenting during residency. Lindsey and Rob both have some questions.

Are there any strategies for a couple to match to residency programs offered at the same location?

Lindsey and Rob are excited to read about the Couples' Match on the CaRMS website: http://www.carms.ca/eng/r1_ranking_couples_e.shtml.

This match is not restricted to people who are married, but anyone who wants to be with someone else — a friend, relative or serious relationship partner — during residency. Upon completing the Rank Order List, applicants can designate themselves as part of a couple by emailing CaRMS and noting their status in the Applicant Webstation. This distinction is not permanent; applicants can later remove themselves from the Couples' Match. A complete set of instructions on participating in the Couples' Match, as well as match statistics, can be found on the CaRMS website.

How will Lindsey manage to do call in her first and third trimesters?

During the first trimester, pregnant residents may struggle with morning sickness, making call responsibilities tougher.

Residents who had children in residency suggested trying to arrange for rotations with light call duties during both the first and third trimesters, avoiding such rotations as ICU and Team Medicine.

In some provinces, a pregnant resident is exempt from call during the third trimester after 31 weeks. This may be earlier in some residency programs, such as Obstetrics. However, this exemption can occur earlier in the pregnancy if the resident's physician deems it necessary. Even though duties may be lighter, residents who had babies cited that a lack of sleep even without call affected their abilities to function at work.

How much time can Lindsey take off work if she has a baby? Can Rob take paternity time when their child is born?

Parental leave time for residents varies from province to province. The time allowed for maternity leave is as follows:

Province	Required length of pregnancy leave	Maximum length of pregnancy leave
Newfoundland and Labrador	N/A	Up to one year
Maritime Provinces	17 weeks	1 year
Quebec	15 to 18 weeks	1 year
Ontario	17 weeks	1 year
Manitoba	N/A	26 weeks
Saskatchewan	18 weeks	1 year
British Columbia	17 weeks	1 year

The decision to take more time than required is up to the individuals, although they may feel pressure from their staff, because they want to prepare the resident for board examinations, and their fellow residents, because they want the resident back on the call schedule.

Paternity leave ranges from five days in Saskatchewan to three to five weeks in Quebec. Rob could talk with the program director and arrange vacation around the expected due date so that he can spend some time at home once the baby is born.

Will having a baby during residency mean that it will take Lindsey longer to finish her residency program?

In general, residents are forgiven the required pregnancy leave length but are expected to make up any extra time taken.

However, residents may feel pressure from the Royal College and their program directors to make up all time in order to be best prepared for board examinations.

What are some advantages to having a child while in residency rather than while practising?

There are a number of advantages:

- › **Financial.** Residents are paid 75% of their pay through Post-graduate Medical Education and Employment Insurance (EI) during the first six months of leave. After six months, they receive only EI. In practice, there are programs like the OMA Pregnancy and Parental Leave Program, where a physician can be paid up to 50% of average fee for service billings or \$1,000 per week, whichever is higher, for a maximum of 17 weeks.
- › **Finding a replacement.** Residents do not have to worry about finding coverage for their practice, whereas practising physicians will need to find someone to care for their patients.
- › **Maternal age.** Residency is now longer. Postponing pregnancy until you finish may mean the pregnancy is not as safe for mom and baby.
- › **Guaranteed time off in residency.** In residency, provincial contracts dictate how residents are paid and how much time off they can take. In practice, these decisions may need to be negotiated with colleagues, and you will be at the mercy of their decision.
- › **Career planning.** When residency is completed, new physicians may want to establish their practice. This would be difficult if they wanted to take time off at the beginning of their career.

What are some options to make return to work easier?

Some suggestions include:

- › Part-time training: work one month, take one month off.
- › Start with lighter rotations.
- › Hire a nanny.
- › Build a strong support system at home.

Should Lindsey factor pregnancy into the decision of what residency program she chooses?

Some residents feel that non-surgical specialties are more accommodating of having children in residency. However, other residents feel that any residency program is manageable with pregnancy, and this should not be factored into career planning decisions.

In particular, provincial agreements differ, so it may be helpful to review which provinces are more supportive of pregnant residents in choosing the location of the residency program.

How can Rob and Lindsey prepare financially so that they can take as much leave as possible?

As parents, Rob and Lindsey may qualify for a number of benefits and tax deductions available from the federal government. These include:

- › **Universal Child Care Benefit.** This federal payment of \$100 per month is paid to every Canadian family for each child under the age of six. Payment is not automatic; they will need to apply for it.
- › **Canada Child Tax Benefit.** *This monthly non-taxable benefit is available for families with low and moderate incomes (less than \$40,970 in 2011).* The maximum benefit is \$112.33 per month for each child under the age of 18 in all provinces except Alberta, where it is \$103.00 for children under seven. If a couple's income is less than \$23,855, they'll also qualify for the National Child Benefit Supplement, which is a maximum \$174.00 per month.
- › **Child care expenses.** In addition, their child care expenses will be deductible, to a maximum of \$7,000.

So the tax breaks will provide some relief and, as mentioned above, Lindsey will be able to receive Medical Education and Employment Insurance payments, to make up for some of her lost income.

If they have personal resources, they could tap into those as well. For example, if Lindsey has been saving in an RSP, she could take money from there. While withdrawals are taxable, if she has little other income her marginal tax rate should be quite low. Withdrawals from her spousal RSP are another option, but only if Rob has not made any spousal contributions in the year of the withdrawal or the two preceding calendar years. Otherwise, the withdrawals would be attributed to him for tax purposes.

If Lindsey and Rob have an investment portfolio or own real estate, they could consider selling assets to generate cash flow. However, any capital gains resulting from the sales would be taxable.

I-2 CASE 2 – OVERWHELMED WITH DEBT

Ruth, a third-year medical student, sits down one night to open her mail. She opens her bank statement. She can't believe that after three years she's already accumulated \$120,000 of debt and has heard rumours of unforeseen costs in fourth year. The reality of having \$150,000 in debt sinks in. She is feeling completely overwhelmed by debt.

Are the rumours that Ruth has heard true? What are the unexpected costs that she may need to cover in fourth year?

Yes, there are some extra costs associated with completing fourth year. Extra costs of fourth year can include applications, travel, and housing associated with electives, the CaRMS application, and writing the MCCQE Part I. Costs associated with electives and CaRMS vary widely, depending on how many electives are chosen and the number of programs to which a person applies. A breakdown of extra costs accrued in fourth year is as follows:

Electives

Highly variable expense. Need to consider cost of application to do elective, housing if not at your university, and travel costs.

CaRMS

Registration Fee + 4 Programs (tax not included)	\$205
Each Additional Program	\$20
Packages for References	\$100
Interviews (Flight, Hotel, Food, etc.)	\$3,000
	\$3,265
MCCQE Part I (Licensing Exam Part I)	
Registration Fee	\$680

Total = \$4,000 + cost of electives

What steps/plans/budgeting should she do now to ensure minimal addition to her debt load?

Ruth needs to remember that her situation is not exceptional. Almost all medical students acquire debt as they get the education they need to become qualified. Before heading into fourth year, she should apply for any bursaries and scholarships for which she's eligible. Even if the amount is small, it's still beneficial.

To ensure she adds as little as possible to her existing debt load, she would be well advised to sit down with a professional, such as an RBC Student Champion, to create a personal budget that makes the most of her unique situation and that reflects her current expenses and any income. This will give her an opportunity to spot possible areas where she could be economizing. Once she knows what her fourth-year costs are going to be, she can amend her budget accordingly.

One of the easiest ways to go astray is to get caught up in credit card debt. If Ruth is carrying a balance on her credit cards, she could be paying interest as high as 28% a year. A much more effective solution is to take out a loan or line of credit at a

much lower interest rate, pay off the credit cards, and then focus on reducing the loan or line of credit.

In fact, most financial institutions have special lending programs for medical and dental students, which have high limits and low interest rates. This should be the first option for financing, but any existing loans that are outstanding will reduce the available credit for studies, so by combining them into one credit line borrowing costs and monthly payments can be reduced.

How will she afford to repay her loans during residency?

While Ruth is a medical student, and for 12 months after graduation, she will likely only have to pay the interest costs on her loan, under a special arrangement that most financial institutions have with students.

As a resident, with income coming in, Ruth should be able to start chipping away at her accumulated student debt. Again, the best way to determine what she can comfortably pay is to track all her expenses and income and create a personal budget.

Once she knows how much she can afford to dedicate to debt repayment every month, she should set up automatic transfers so that amount is automatically moved from her bank account to her outstanding debt.

She overheard some classmates mentioning something about saving receipts for income taxes. Why would they do this?

As a student, Ruth can claim tuition, education, and textbook tax credits. However, she may not have sufficient income to be able to use up all the credits to which she's entitled. She can carry forward up to \$775 in combined federal credits and use them to reduce her income tax in a later year.

I-3

CASE 3 – WHO HAS MORE DEBT? A COMPARISON OF TWO-YEAR, FIVE-YEAR AND SEVEN-YEAR RESIDENCY PROGRAMS

Tyler, a fourth-year medical student, is still undecided about his future career choice. He’s thinking about Family Medicine, Endocrinology specializing in Pituitary and Thyroid Disorders, or General Obstetrics. He accumulated \$160,000 of debt over the course of his medical training. Coincidentally, this is the average amount of debt acquired by Canadian Medical School Graduates. He heard that some of his classmates were considering Family Medicine because of the shorter training time to pay off their debt more quickly.

What would his financial situation look like if he did a five-year residency plus a fellowship, a five-year residency, or a two-year residency program?

The answer depends largely on how much debt Tyler already has, where he does his residency and fellowship, and what his expenses are during those years.

Residency and fellowship salaries vary from province to province. But if we assume that Tyler will be doing his residency and fellowship in Ontario, here is what he can expect in terms of pay:

Residency salaries in Ontario

	Effective August 1, 2010
PGY1	\$50,064*
PGY2	\$58,439
PGY3	\$61,990
PGY4	\$66,189
PGY5	\$70,584
PGY6	\$74,715
PGY7	\$77,667
PGY8	\$82,063

A fellowship in Ontario would pay about \$70,000 per year, but that figure can vary depending on the field in which Tyler would choose to work.

If Tyler were to enter into practice after a two-year residency, for instance, he would begin earning more than a third-year resident. However, if he were to choose a specialty that required a five-year residency, and also did a fellowship, his eventual earning power would likely be higher than if he had done just a two-year residency.

As you can see, there is no simple answer as to which pathway will be the most financially rewarding for Tyler.

Similarly, there is difficulty generalizing Tyler’s situation to medical students nationwide. However, three factors have been suggested that may contribute to the rate at which one’s debt load can be cleared. In order to identify the impact these factors can have on making a comparison between length of residency programs, a thorough analysis is suggested. RBC Student Champions are able to help with such an analysis.

Lastly, this case is an example of the importance of understanding the relative importance of each key factor relevant to making your own career decision.

Alex has just started his residency in Ophthalmology and is considering subspecializing in treating Glaucoma. Alex is excited about starting his residency but wonders what is required to subspecialize within a given specialty.

What are the steps he needs to take to specialize in Glaucoma?

Alex goes to talk to the Program Director of Ophthalmology and learns that he will need to do a fellowship in Glaucoma. Through this conversation, he learns that a fellowship is a way to obtain further training within a given area of specialization.

Fellowships are usually associated with a decision to practise academic medicine in most cases. In some programs, such as vascular surgery, a fellowship is required in addition to finishing an accredited residency program. However, in Alex's case, completing a fellowship may allow him to choose an area of specialty. For example, new Radiologists may enter fellowships based on anatomical divisions (e.g., Abdominal Radiology) or techniques (CT or MRI) that may not offer an accreditation or certificate, but rather allow them to practise in a more specialized field. In addition, by doing a fellowship in Glaucoma, Alex can tailor his practice to treating glaucoma and providing more specialized care.

From a practical standpoint, new graduates may discuss job opportunities at an academic centre and decide to complete a fellowship in that area. For example, a new ENT resident may discover that the department he is interested in working in is interested in hiring a specialist in endoscopic skull-base surgery. The resident may pursue a fellowship in endoscopic skull-base surgery and return to that academic institution for employment.

There are research fellowships and clinical fellowships as well as fellowships that combine both research and clinical work. In general, fellowships can take from a few months (in Family Medicine) to three years.

In order to begin a clinical fellowship program, such as a Glaucoma fellowship, Alex must have a certificate authorizing postgraduate education as well as a source of funding. Some institutions provide funding while others expect applicants to find their own. Alex may have to submit an application during the summer or fall (depending on the program) the year before he intends to start the fellowship. Alternatively, a fellowship may be arranged based on a phone call or matching service.

Will Alex be in a different city for his fellowship?

Alex could be in a different city, depending on where there are openings for Glaucoma fellowships the year he finishes the Ophthalmology program. He's best advised to attend the best Glaucoma fellowship program, no matter where it is located, in order to make him a competitive job candidate upon completion of the fellowship.

Andy is a third-year medical student. His wife is a third-year law student who will be entering the workforce next year. They have talked about having a family but have decided to wait until they are more established in their careers. Andy has gone to many information sessions about various types of insurance he should look into, but didn't really think he needed any of it. Andy decides he'd rather not obtain any disability insurance because he is young and healthy and thinks the chances of him becoming disabled are small. Andy does an Internal Medicine rotation and unfortunately sticks himself with a needle that he used to inject an HIV-positive patient. What should he do?

First, Andy should immediately speak to the doctor in charge and explain what happened. He should tell the doctor the patient's name so the doctor can proceed with getting consent for a blood sample to determine HIV and hepatitis serology. The doctor will also consult an Infectious Disease physician.

Within two hours of the needlestick, Andy should go to Occupational Health (if the event occurred during the work day) or the Emergency Room if the event occurred after hours. Blood will be drawn to test for HIV or hepatitis serology.

Infectious Disease will perform a risk analysis to determine the likelihood of infection transmission, taking into account such factors as the depth of the needlestick, the bore of the needle and patient characteristics. If there is a high risk of HIV infection, Infectious Disease may recommend a post-exposure prophylaxis cocktail; however, it is up to Andy to decide whether or not to take it. The cost of the cocktail is covered by Worker's Compensation. Common side effects include nausea, vomiting, and diarrhea, which may make it necessary to take one to three weeks off work. If the patient is known to have HIV/AIDS, the Infectious Disease physician may prescribe their treatment regimen to Andy.

Blood will be drawn over the next six months to ensure Andy does not seroconvert.

If the patient has Hepatitis B, Andy should be protected through Hepatitis B immunizations. To ensure Andy has an appropriate immune response, antibody titres may be drawn. A booster immunization may be given to prime the immune response if the titre is low.

The time following a needle-stick injury can often be an emotional one. Andy may receive support from Occupational Health or the Education Assistance Program. A referral to an immuno-compromised clinic is another potential source of support.

Will Andy be able to work if he is HIV- or Hepatitis B- or C-positive?

Andy will be able to work; however, in some provinces he has an ethical obligation to inform the Provincial College of his status if he performs high-risk procedures. These include digital palpation of a needle tip or sharp object in a body cavity (e.g., major abdominal, vaginal, cardiothoracic or orthopedic operations), repair of major traumatic injuries or cutting/manipulation in the oral cavity. The college would then review whether any practice modifications are necessary. Failure to

notify the college would be considered unprofessional. In most cases, the physician will decide to practise a different area of medicine. Further information can be found at <http://www.cpso.on.ca/policies/policies/default.aspx?ID=1474>.

Will he still be eligible for disability insurance?

After being stuck with a needle, there may be a waiting period prior to Andy's being approved for coverage. The insurer will also need reassurance that he is not HIV positive.

What happens if he is diagnosed with a serious illness during his residency or career? Is there a type of insurance that would allow him to pay off his student debt?

If the insurance was purchased prior to becoming ill (and prior to the needle incident), he could pay off his student debt under the RBC Insurance "student limits." Critical illness insurance would provide a lump sum benefit if Andy is diagnosed with a serious illness; this is paid regardless of whether or not Andy can work/earn an income. Disability insurance would provide a percentage of income replacement if the serious illness prevented Andy from working.

What if Andy dies unexpectedly after his first child is born? Is there any insurance to ensure his child and wife are looked after financially?

Again, if Andy had purchased life insurance prior to the needle incident, his wife and child would receive the benefits.

I-6

CASE 6 – TAILORING LIFESTYLE AND PURSUING A SUBSPECIALIZED INTERNAL MEDICINE CAREER

Sunny, a second-year medical student, obtained a Master's degree and worked in a lab before he started medical school. One day in class he looks around at his classmates and realizes that he is a bit different than them. At 28, he's a few years older than the average student, he's married to a woman with an established career, he has a two-year-old daughter at home and, on top of his \$18,000 tuition, has a mortgage to pay. Sunny starts to think about his future and wonders.

What is the best way for him to manage the debt he will acquire?

Although he is older than his fellow students and has the responsibilities of a child and mortgage, Sunny has an advantage in that his life partner has an established career and is earning a salary.

Sunny and his wife would be well advised to sit down together with an RBC Student Champion and create a personal budget that makes the most of their unique situation.

One of the best ways to tackle debt is to pay less tax and, as a couple, there may be many opportunities for Sunny and his wife to reduce their overall tax bill through effective tax planning.

For instance, if Sunny is unable to use all the education, tuition and textbook tax credits to which he is entitled, up to \$775 of unused credits can be transferred to his wife.

They will also want to speak to a tax specialist about effective ways to split their income — that is, to shift taxable funds to Sunny, who pays tax at a low marginal rate, from his wife, who has a higher income and therefore pays a higher rate. One solution is for Sunny to invest any income that he earns, while they rely on his wife's income to cover all the household expenses — including his loan repayments. Any income generated by the invested funds would be taxable to Sunny, at his low marginal rate.

He'd love to be a Cardiologist, but wonders how new physicians arrange their workload. Is it possible for him to arrange a 50-hour workweek as a Cardiologist?

In general, most new physicians should be able to find a niche within a specialty that will accommodate the hours they would like to work. There are some specialties that are not so accommodating of flexible schedules. Some factors that may limit Sunny's ability to choose the number of hours he works include taking an academic position with extra responsibilities, taking care of in-patients, choosing a specialty or area of interest that requires call duties or practising in a situation where there are no other Cardiologists (i.e., he has greater responsibilities).

Factors that may promote flexibility include taking a position where he can network with other Cardiologists and share the workload, working in an outpatient setting, and spending some time in non-patient situations (reading echocardiograms). Although not applicable to Sunny, shift work can also accommodate a flexible schedule.

In summary, Sunny is wise to consider the number of hours he is willing to work when making career decisions, as it is not possible to limit hours in all areas of each specialty.

He's quite aware of how expensive school is and wants to save for his daughter's education. What should he invest in? What about his retirement?

For long-term goals like these, Sunny has an opportunity to take advantage of tax-deferred compound growth by opening a Registered Education Savings Plan (RESP) for his daughter's education and a registered Retirement Savings Plan for himself. In addition, his wife could contribute to a spousal RSP on his behalf.

RESPs. RESPs are subject to a lifetime contribution limit of \$50,000 per beneficiary (i.e., the future student). There is no annual limit. All money in the plan grows on a tax-deferred basis until withdrawn. When earnings are withdrawn to pay for his daughter's post-secondary schooling, the withdrawals will be taxed in her hands and are likely to attract no tax.

In addition, the federal Canada Education Savings Grant (CESG) will top up his RESP contribution by 20% on the first \$2,500 contributed every year. Maximum CESG over the life of the plan is \$7,200.

RSPs. To save for his retirement, Sunny can contribute a maximum of 18% of his previous year's earnings. These contributions are tax-deductible. Earnings are tax-deferred as long as they stay in the plan. His wife can contribute all or any portion of her annual allowable RSP contribution to a spousal plan for Sunny.

What residency program should he enter to get into a Cardiology program? What is the application like?

Sunny should apply to Internal Medicine residency programs. After completing three years of Core Internal Medicine, he will then apply to subspecialties of interest. Subspecialties available include Cardiology, Clinical Immunology and Allergy, Clinical Pharmacology, Endocrinology and Metabolism, Gastroenterology, General Internal Medicine, Geriatric Medicine, Hematology, Infectious Disease, Medical Oncology, Nephrology, Occupational Medicine, Respiriology, and Rheumatology.

Third-year Internal Medicine residents apply for these fellowships through the R4 match. The match process was recently changed in 2009 to a match system similar to CaRMS. More information about the R4 match can be found at http://carms.ca/eng/r4_about_intro_e.shtml. In the past, most students will get the subspecialty of their choice, but may not get the location of their choice. In 2007, 96% of applicants received their first choice of specialty; 85% got their first choice specialty at their first choice location. Similarly, in 2006, 97% of applicants received their first choice of specialty, 80% at their top location. Competition for specific locations tends to change from year to year as levels of interest and availability fluctuate.

In late September and early October, candidates will find out whether they have been offered an interview from programs they applied to. All subspecialties (except Cardiology, which organizes a centralized interview day) require candidates to travel to interviews.

There is a match day in early November. On this day, candidates will receive phone calls or faxes from programs with an offer of acceptance. After receiving an offer, a candidate can either accept, decline, or hold the offer. Offers can be held for a maximum of two days and a maximum of two offers can be held at the same time. If an offer is declined, that program will then offer acceptance to another candidate in the applicant pool.

This process continues for two weeks, when all offers held become firm. There is a website that becomes active on the Match Day where candidates can keep track of offers declined, accepted, and held. Few candidates will go unmatched, but there is a second iteration for those that do. Some Core Internal Medicine programs may offer unmatched candidates a spot in their General Internal Medicine program.

Most students will get the subspecialty of their choice, but may not get the location of their choice. In 2007, 96% of applicants received their first choice of specialty; 85% got their first choice specialty at their first choice location. Similarly, in 2006, 97% of applicants received their first choice of specialty, 80% at their top location. Competition for specific locations tends to change from year to year as levels of interest and availability fluctuate.

Jaime, a fourth-year student, comes home from a long day of dealing with patients and realizes he doesn't enjoy patient contact. He hasn't enjoyed the past year of clerkship and doesn't want to spend the rest of his life tending to patients in a hospital or clinical setting. However, he doesn't want to throw the past four years of education down the drain (not to mention the drain on his bank account) and plans to graduate. He knows vaguely that there are opportunities for MDs that don't revolve around the traditional physician's role, but doesn't know what they are or where to start looking. He thinks there must be options available for medical students in his position.

What are some career options available to Jaime that make use of his medical degree but do not require him to practise medicine?

Jaime might want to consider:

- › Working for a consulting firm, such as McKinsey Consulting.
- › Getting involved in health policy (through Community Medicine Residency training).
- › Focusing on the financial aspects of hospital or health center management (e.g., CEO of a hospital).
- › Moving into biotechnology.

In addition to the above list, Jaime may also consider specialties with little patient contact, such as Radiology or Laboratory Medicine.

Do the alternative careers require additional training or schooling?

Sometimes consulting firms will require an additional course. If Jaime is interested in financial aspects of medicine, he may elect to do an MBA. Some students who find themselves in this position may have already completed training before medical school, such as a law degree or financial training, giving them the capacity to go back to those fields and function in a specific niche.

What is the starting salary for these careers?

The starting salary at a major consulting firm is around \$150,000 a year.

Should he apply to CaRMS?

Anecdotally, most students will come back to medicine, making the completion of a residency program highly valuable. Counselors will often advise students to apply for a residency program in case they change their mind at a later date.

If he does not apply to residency, how will his government loan and line of credit payments be affected? If he goes for further schooling, will his government loan payment be deferred?

As long as Jaime is enrolled as a student in full-time studies as defined by Human Resources and Social Development Canada (generally, a full course load), his government-sponsored student loans will remain in Class A, "in-school" status and the monthly interest will be paid by the government.

Private debt, such as Jaime's personal line of credit, will vary according to the issuing financial institution. In most cases, the debt will continue to require interest-only payments until 12 months after he graduates or withdraws from school. Note, however, that depending on the field of study (if other than medical/dental) the limit maybe capped and no further advance will be made unless a suitable co-signor is provided.

Sanjay is a second-year medical student who isn't sure what career option he'd like to pursue, but knows he doesn't want to work in a hospital or academic setting. Opening up a private practice in his hometown is looking very attractive but he has heard that start-up costs and overhead can be very steep. He plans to stay in the same location until he retires but worries that with his financial debt after medical school, he will not be able to pursue his ideal practice for many years.

What specialties would be feasible in a private practice setting?

The majority of physicians will spend part of their time in a private practice setting. A list of specialties that would accommodate Sanjay's independence includes Anesthesiology, Community Medicine, Dermatology, Diagnostic Radiology, Family Medicine, Internal Medicine, Adult Neurology, Occupational Medicine, Ophthalmology, Pediatrics, and Psychiatry. Sanjay could potentially open a clinic with training in any of the above specialties, but in some cases the procedures or conditions he could treat or manage would be limited compared with what he could do in a hospital setting. For instance, if Sanjay trained in Ophthalmology, he could do LASIK surgery, but perhaps not be involved in Neuro-Ophthalmology cases.

Surgical specialties may not be so appealing to Sanjay because surgery requires an operating room in a hospital; however, surgeons may have private offices outside of a hospital for their clinics. In some cases, surgeons may be able to operate outside of the hospital setting; facial plastic surgeons are an example. Pathologists require access to laboratories and usually work in conjunction with hospitals, making private practice unattainable. Pediatric Neurologists may have private practices, but they are usually associated with a hospital because of the rarity of pediatric neurological conditions. Physical Medicine and Rehabilitation is generally practised in hospital. Radiation Oncology and Nuclear Medicine require access to technology usually owned by hospitals, making private practice unrealistic.

Sanjay had questions about whether he'd be able to finance a practice and wondered if this career path was even worth pursuing. What are financial options available to physicians opening practices?

Term loans, operating lines of credit, and business overdraft protection are financing options available to tailor to the needs of physicians with their own offices. Sanjay might also be interested in the process of incorporating private practices.

More detailed information on these options can be found in Section B-5.

What are some costs associated with opening a clinic besides the obvious costs of an office space and equipment?

Aside from equipment and rent, there are other costs involved in starting your own practice, depending on the size of the practice and what type of medicine you're practicing.

Here are a few:

- › Fees for a contract lawyer to develop partnership or group agreements if you are working with other people.

- › Fees for an accountant to set up an efficient accounting system and file your income tax returns.
- › Fees for a bookkeeper to formulate and report on monthly, quarterly, and annual finances.
- › Fees for a real estate broker to find an appropriate practice location for you.
- › Fees for an interior designer/contractor to design your office space.
- › Payments to support staff, such as a nurse or receptionist.

How would he obtain equipment and hire staff?

Most physicians need to borrow money to start up their practices. Young doctors like Sanjay can often barely purchase a new computer without a loan, let alone hire staff and equip an office without some sort of financial assistance.

Equipping and furnishing an office can be very expensive. Sanjay will need to examine his financial resources and what furnishings and equipment has to be purchased before seeing his first clients, and what he may require for future expansions.

He should discuss with his advisor whether leasing or purchasing equipment outright is the best option for him. He will also need to decide what is needed before opening his practice versus what can wait until after opening his practice. He should do price checks and use supplier competition to his advantage, check guarantees and warranties, and ask other professionals in his field about suppliers' customer service record, equipment maintenance, and client satisfaction.

When it comes to hiring staff, Sanjay will probably find that staff costs can comprise up to 50% or more of total office expenses. That alone should prove the importance of keeping excellent hiring practices.

Here are some of the greatest mistakes that professionals make when hiring:

- › Hiring too quickly (i.e., the first person interviewed or the best of a "poor lot").
- › Hiring staff who aren't qualified or who don't have the characteristics needed for the job so that lower rates of pay can be offered.
- › Hiring staff who lack initiative or who aren't interested in helping the practice to grow.

Good hiring practices start with careful planning by:

- › Listing all the tasks that will have to be done within the office, from opening mail to greeting clients and handling finances.
- › Assessing the experience needed by staff members to be able to do the work efficiently and assigning each task to certain positions, such as receptionist, nurse, technician, legal secretary, etc.
- › Assessing how much time each task will take on a daily, weekly, or monthly basis; and assessing which positions should be hired on a full-time basis and which can be hired on a part-time basis, bearing in mind the importance of having continuity throughout the day.

Mambo and Adil are third-year medical students who have just finished their second clerkship rotation in Surgery. Mambo was not particularly interested in Surgery before his clerkship rotation but is now keen on Plastic Surgery. He has heard from Adil that it's difficult to get into a Plastic Surgery residency program. Adil has shown interest in ENT since first year. Adil shadowed ENT surgeons regularly throughout first and second year and also pursued ENT research in both summers.

Mambo is very worried that it is too late for him to pursue Plastic Surgery, especially when other students, like Adil, have demonstrated interest in competitive surgical programs by committing their summers to research and shadowing surgeons.

Mambo seeks advice from Adil about how to best pursue Plastic Surgery. During this conversation, Adil starts to wonder what would happen if he changed his mind about ENT.

Mambo and Adil both have some questions about pursuing competitive surgical residency programs.

Is research necessary? Does it matter if research is in that particular field? For a student like Mambo, are there any opportunities to complete research in the field during clerkship?

Research is highly recommended, particularly for programs located at centres with a strong academic focus. It is helpful for research to be in the particular field, in this case, Plastic Surgery, as it demonstrates genuine interest in the specialty.

There are always opportunities to be involved in research at any stage. Projects can range from writing up an interesting case report, to clinical research, to basic science research, depending on the time that you have available. For example, a first- or second-year student might be able to devote a summer to full-time basic science research, whereas a third- or fourth-year student might have time to work on a case report or small clinical research project.

Is it discouraged to show interest in other specialties, for example, doing summer research in ENT in first-year like Adil, but then realizing you want to do Ophthalmology in third year?

Most people on residency committees are reasonable and don't expect students in first-year medical school to know with 100% certainty what specialty they will choose for their career. At that point, many students will not have had direct clinical exposure to any specialty. It can be a positive quality to demonstrate that various surgical subspecialties were considered and explored, and that an informed decision was ultimately made to pursue a particular subspecialty.

Should all fourth-year electives be in that field? If not, how many should? What's the best way to set up electives?

All fourth-year electives do not need to be in that particular field, but at least one should be. The best way to set up electives is to speak to residents in the program of interest, and find out from them who they recommend for elective experiences. Although many people focus on the importance of working with

a program selection committee member, another important thing to consider when choosing an elective is what exposure and insight you will gain from the experience.

Should students like Adil who are interested in surgery from first year pursue surgical shadowing and research in first and second year?

These are good ways to explore an interest in surgery. For one thing, you may meet surgeons in the department to which you subsequently apply for residency. More important, however, is that these activities give you early, direct exposure to the specialty before clerkship rotations begin. Shadowing experiences may be helpful in ruling in or out surgical subspecialties that you want to pursue further in the form of clerkship electives. The pre-clerkship schedule may also allow you to take on a larger research project.

However, there are many valid ways to spend the "extra" time that you have in pre-clerkship. Some people do international electives, travel for pleasure, play sports, and pursue other non-academic activities. It is important to be well-rounded and balanced, too.

Is it too late for Mambo to realistically pursue Plastic Surgery? What should he do to be a competitive applicant?

It is not too late for Mambo. He should spend some of his remaining elective time doing Plastic Surgery, and consider getting involved in a research project.

Is there anything else that someone interested in a competitive surgical residency program should do in order to be a successful applicant?

Besides demonstrating interest in the particular field by taking electives or participating in research projects, it is important to be well-rounded and have interests outside of medicine.

Other advice would include being a "team player" and working hard on all of your clerkship rotations, not just the surgical ones, and being yourself. If you are genuinely interested in a particular subspecialty it will be clear to program committee members. As well, remember that during your electives and residency interviews, you are also evaluating the specialty and program to decide if it suits what you are looking for in your career. Finally, there is no one single formula of electives or research projects that will guarantee a residency spot; everyone knows of people who did many electives and projects right from first year and did not get their first choice, as well as people who decided "late" and ultimately got into a competitive program.