



FAMILY MEDICINE Expansion Report 2013


A University / Government Collaboration

Northern Ontario School of Medicine
École de médecine du Nord de l'Ontario

Schulich MEDICINE & DENTISTRY

uOttawa
Faculté de médecine
Faculty of Medicine

McMaster University

Michael G. DeGroote SCHOOL OF MEDICINE

Queen's UNIVERSITY
School of Medicine

UNIVERSITY OF TORONTO
FACULTY OF MEDICINE

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EXECUTIVE SUMMARY

A carefully planned and executed collaboration between Ontario faculties of medicine, the Ontario government and the medical profession has led to dramatic change in the number of family doctors in the province and improved access to primary care.

Faculties of medicine have more than doubled the number of family medicine residents. Today, family medicine programs graduate more than 500 family doctors per year, partnered with more than 155 communities throughout Ontario, which is enabling these communities to recruit new graduates. Many communities have donated generously to support family medicine education infrastructure, saving the government millions of dollars.

Family medicine expansion has created many opportunities for universities to align with Ontario's Action Plan for Health Care and with transformation priorities such as Health Care Connect and Health Links. The deliberate, interdependent strategy of universities, government and the medical profession is helping reform primary care, and we are seeing very positive early outcomes of improved access to primary care. Over 2.1 million patients who previously did not have a family doctor are now enrolled in a primary care model.

Through the family medicine expansion, we have created a cadre of family medicine faculty and learners able to propel primary care reform and the government's transformation agenda, positioning Ontario to continue to meet the future primary care needs of the province. This report is an accountability document, highlighting the positive impact of investments made to date. However, the process of primary care renewal is still underway; while we are on the right track, it is critical to sustain the work underway and investments made to ensure the ongoing success of primary care reform.

FAMILY MEDICINE EXPANSION REPORT

A University / Government Collaboration

Ten years ago Ontario faculties of medicine and the Ontario government embarked on a strategic collaboration to address the doctor shortage. Medical school enrolment grew by 80% and focused efforts were made to address the 1 in 11 Ontarians who couldn't find a family physician.

Today, Ontario family medicine residency programs graduate more than 500 family doctors per year, up from just over 200 ten years ago. As a result of the family medicine program expansion, Ontario's six family medicine programs have graduated 1,900 additional family doctors. These graduates are helping to provide care to 2.1 million Ontarians who now have access to primary health-care services and are no longer "unattached" patients.

The coordinated strategy undertaken by universities and government involved aggressive capacity building through increased numbers of family physicians trained and community engagement to improve their ability to recruit new graduates. These initiatives are laying the groundwork to enable primary care reform and are part of an interdependent strategy to ensure better provision of patient care and create a more attractive primary care environment.

University Initiatives
- Residency Expansion
- Community Engagement in Education
- Medical Student Career Choice

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Primary Care Reform
- Patient Enrolment
- Inter-Professional Care Models
- Family Physician Reimbursement Models

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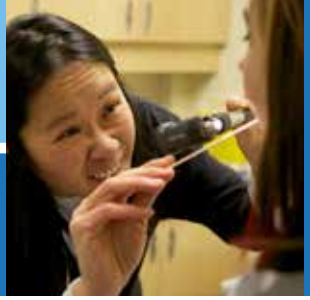
Improved Access

These deliberate and strategic actions by Ontario's universities and the Ontario government are only just beginning to pay dividends by diminishing the family doctor shortage and positioning the province with a resource of learners, graduates, faculty and preceptors able to propel primary care reform and the government's transformation agenda. Sustainability of this fledgling resource is critical and key to the ongoing success of primary care reform.



The specific university-led initiatives undertaken these past ten years include:

- Attract more medical students into choosing a career in family medicine;
- Train more family physicians; and
- Partner with communities across Ontario to provide local training opportunities so that, following their residency training, more family physicians will stay and work in previously underserved areas of the province.

These initiatives align both with national family medicine curriculum directions to be socially accountable and produce family physicians who meet the needs of the Canadian population, and with the March 2012 Health Canada-funded report, "The Future of Medical Education in Canada Postgraduate (FMEC-PG)". The FMEC-PG report provides a collective vision aimed at preparing the Canadian medical education system for the century ahead, including a recommendation to cultivate social accountability through experience in diverse learning and work environments. Family medicine in Ontario is already embracing this mandate.

ATTRACTING MORE MEDICAL STUDENTS INTO CHOOSING A CAREER IN FAMILY MEDICINE

In the late 1990s and early 2000s, Canadian medical students' interest in family medicine as a career had waned in large part due to family physicians being overworked and undervalued relative to other specialties. Throughout the 2000s, primary care reform, combined with changes to medical school curriculum to provide students with more exposure to family medicine, resulted in significant improvement in medical student interest in family medicine as a career choice.

First choice for family medicine in the national Canadian Resident Matching Service (CaRMS) match has rebounded from an all-time low of 25% in 2003 to 36% in 2013 (Figure 1).

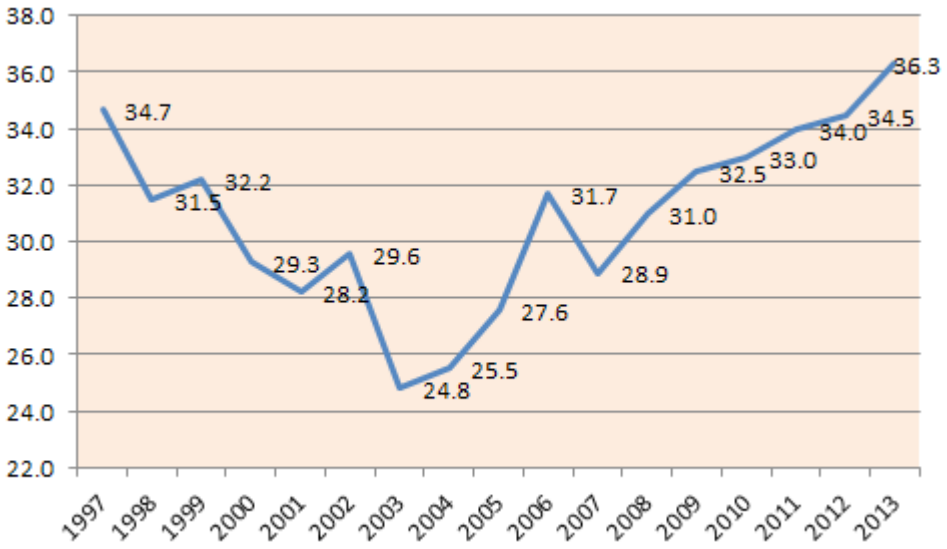


Figure 1 - Percent Canadian Medical School Graduates (CMGs) who Ranked Family Medicine as 1st Choice in the CaRMS Match

In addition, the fill rate for family medicine positions has dramatically improved, reaching 91% in 2013 (Figure 2).

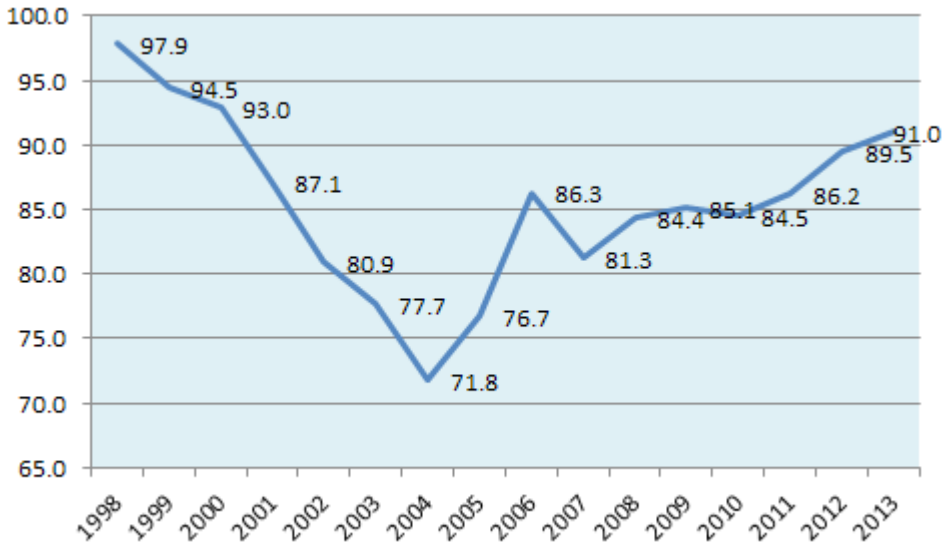


Figure 2 - Percent Family Medicine Positions Filled in Canada by Canadian Medical School Graduates (CMGs) in the 1st Iteration of the CaRMS Match

In 2013, two Ontario medical schools had the highest proportion in Canada of Canadian medical school graduates choosing a career in family medicine: 62.5% of Northern Ontario School of Medicine (NOSM) graduates and 45.8% of University of Ottawa medical graduates chose family medicine in the CaRMS match.[1]

TRAINING MORE FAMILY PHYSICIANS

First year family medicine positions have grown significantly in the past ten years in all Ontario training programs (Figure 3) to a provincial total of 510 PGY1 positions in 2013. There are over 1,000 family medicine residents training in the province across the 2-year program.

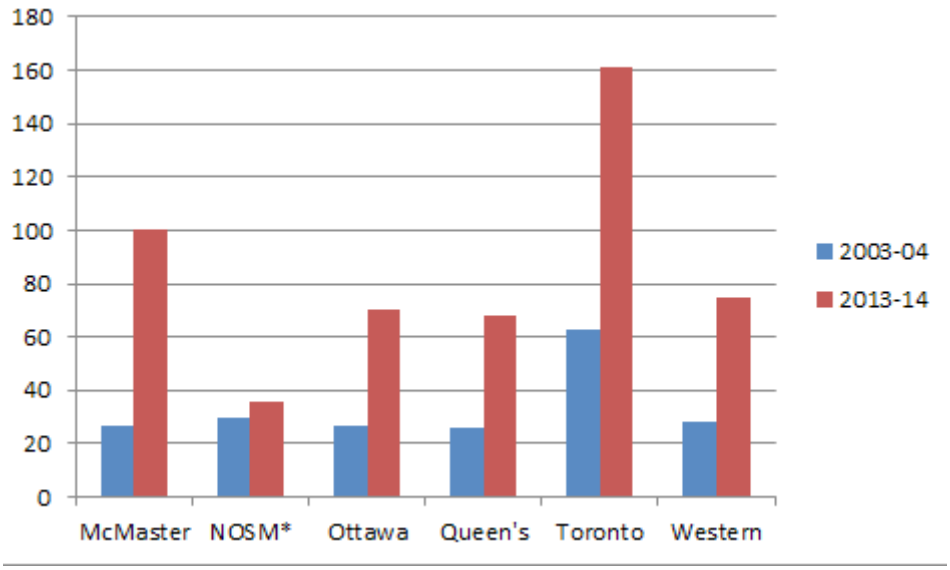


Figure 3 – Growth in First Year Family Medicine Residency Positions at Ontario Medical Schools

**The Northern Ontario Medical School (NOSM) Family Medicine Program started in 2007-08 and 30 Family Medicine North positions were transferred to NOSM at that time.*

Family medicine residents are not just learners; they are service providers and help teach medical students. Family medicine residents spend 10 months of their 2-year program working in family medicine clinics (8 months in family medicine and 2 months in rural family medicine). Family medicine residents in Ontario make a significant contribution to the health care system; they provide approximately 625,000 hours of care to family medicine patients each year.

The government provides annual expansion funding to support training of the additional 600 first and second year family medicine residents. The funds are used to pay faculty and preceptors, teaching placement coordination and administration, travel and accommodation, supplies and services, and educational activities.

COMMUNITY ENGAGEMENT IN EDUCATION AND RECRUITMENT OF FAMILY MEDICINE GRADUATES

Ontario family medicine programs have partnered with more than 155 communities throughout Ontario to train family doctors (Figure 4). The benefit of this community engagement is two-fold: it creates educational and clinical capacity to train family medicine residents; and it enables communities to recruit new graduates.

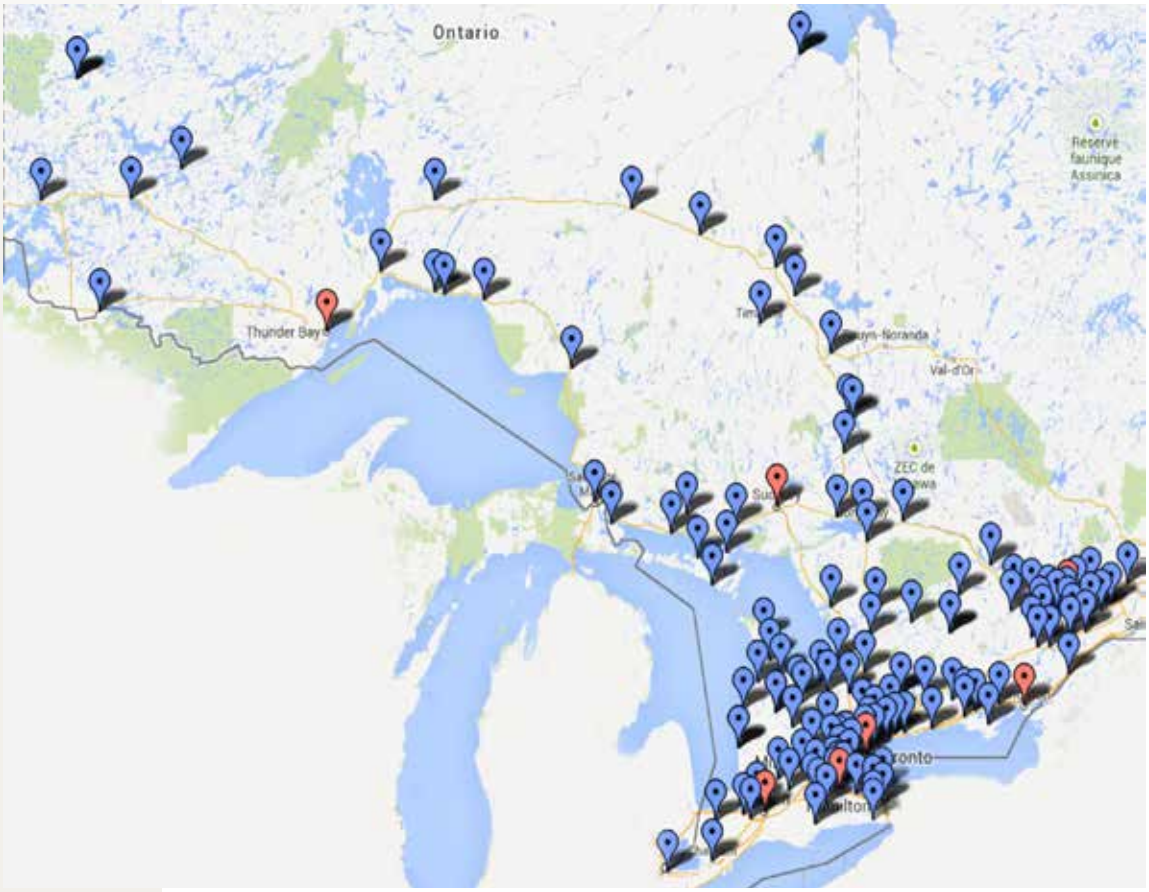


Figure 4 - Family Medicine Training Sites in Ontario in 2013 (red pins are the communities with medical schools)

The family medicine expansion is well aligned with a social accountability mandate and the College of Family Physicians of Canada's (CFPC) competency-based curriculum initiatives to train family physicians that provide comprehensive care and continuity of patient care. The CFPC has initiated an evaluation to collect information from learners and residency programs to determine what role competency-based education has in influencing the type of family physicians produced, their type of practice patterns, and their location of practice. The study is being piloted in a number of medical schools with the hope that it will be implemented Canada-wide within the next year.

In the 2012 National Physician Survey, 34% of family medicine residents said that geographic region of their choice is the most important attribute of their future practice. Almost 1/3 grew up in a small town, rural or isolated community. The survey found that 36% of all family medicine residents plan to work in a small town, rural or isolated community and that 65% of final year family medicine residents are being recruited by the community in which they trained.[2]

Data collected by the Ontario Physician Human Resources Data Centre (OPHRDC) show an increase in the province of 2,240 Ontario-trained family physicians over the time period of 2002 to 2012 and an increase in the family physician to patient population ratio across all Local Health Integration Networks (LHINs) (Figure 5). Even with this promising increase of family physicians in the last 10 years, Ontario still has one of the lowest ratios of primary care physicians to population among Canada's ten provinces at 92 per 100,000.[3]

It is important to note that while the physician to patient population ratios show a solid move in the right direction, they don't necessarily tell the full story for larger geographic regions of the province; Figure 5 shows northwestern Ontario with one of the highest physician-population ratios, yet we know there are still many communities in the north without ready access to physician services. The improving ratio is likely due to a declining population in this region.

In general terms, Figure 5 shows that every region in the province has benefitted from the expansion and primary care reform. While we are on the right track, it is critical to sustain the work underway and investments made.

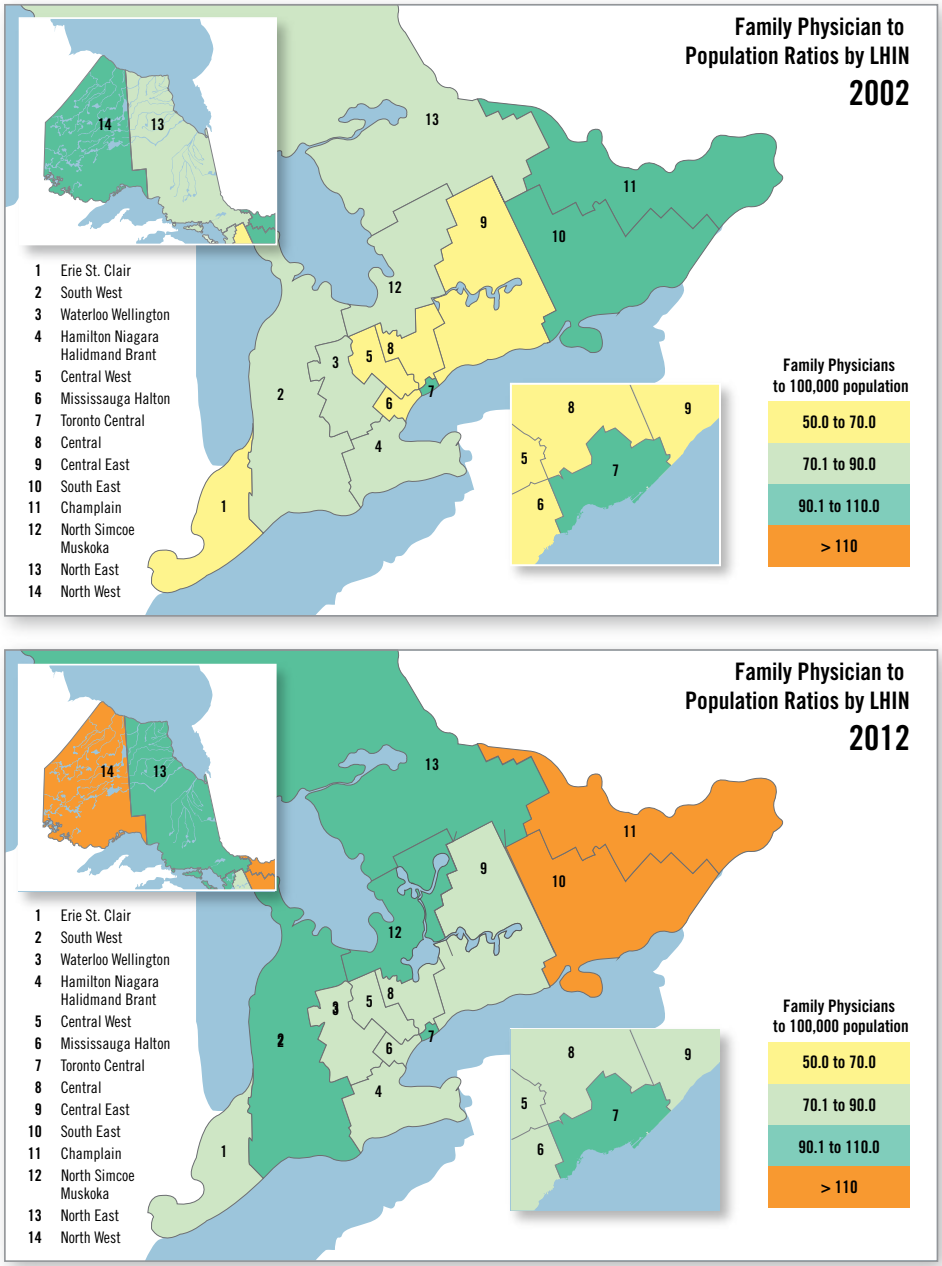


Figure 5 – Family Physician to Population Ratios by LHIN in 2002 and 2012 [4]

COMMUNITY IMPACT: Petrolia, Ontario

A research study at Western University looked at five years of data and found that 60.1% of family medicine graduates are practising in southwestern Ontario (SWO); 69.8% of those practising in SWO are practising in rural settings, and 77% are practising comprehensive family medicine.

Petrolia Family Medical Centre

Dr. Firas Al-Dhaher grew up in a rural community outside of London, Ontario, where his passion for rural medicine began. He graduated from Schulich School of Medicine & Dentistry, Western University, where he trained in rural family medicine. His clinical practice interests include emergency medicine and sports medicine. He is also very enthusiastic about medical leadership and patient advocacy. Dr. Al-Dhaher lives with his wife and twin boys in Petrolia. When he's not chasing after his sons, he can be found reading a good book or watching sports.

At the Schulich School of Medicine & Dentistry, you're more than just another resident. We specialize in training comprehensive family physicians and future leaders in family medicine. We do this through a highly adaptable program that includes tailor-made curriculum and educational programs for residents.

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Western

COMMUNITY IMPACT: Chapleau, Ontario

There are also signs that NOSM is successful in graduating health professionals who have the skills and desire to practice in rural/remote communities: 65% of the graduates of NOSM's family medicine program are practising in Northern Ontario. NOSM's social accountability mandate to contribute to improving the health of the people and communities of northern Ontario is creating new economic activity, enhanced recruitment/retention for universities and hospital/health services, and a sense of empowerment among community participants.[5]

For almost 7 years, physician care in Chapleau, Ontario relied on the provincial MD locum program, which was costly for the province and did not provide patients with continuity of care. Today, three full-time family physicians, all graduates of NOSM's medical school and family medicine program, call Chapleau home. Two of them, Drs. Stephen and Kendra Saari, completed their family medicine training in Sudbury in 2012 and indicate "the Northern Ontario School of Medicine gave us the opportunity to train in the field of our dreams. The north opened their arms to us, and gave us the opportunity to practise our skills. For both opportunities we are truly thankful."[6]

Dr. Kendra Saari, Dr. Stephen Saari

COMMUNITY IMPACT:
Owsweken, Grand River Six Nations

Dr. Amy Montour is an Assistant Clinical Professor (Adjunct) at the Michael G. DeGroote School of Medicine, McMaster University and a family physician with the Six Nations Family Health Team, White Pines Wellness Complex in Ohsweken, Ontario. Dr. Montour is an Oneida woman from the Six Nations of the Grand River First Nations located 45 minutes south of Hamilton. At age 26 with three young children to care for, Amy obtained her General Education Diploma (GED) and a general first year of art & sciences. She entered and completed nursing at McMaster University while commuting back and forth from Six Nations. She graduated Summa Cum Laude and entered the thesis stream of the Master of Science (Nursing) program at McMaster and also completed a post graduate diploma from the Ontario Training Centre University Consortium in Research in Health Human Resources & Health Policy. Upon completion of her graduate degree she entered the Michael G. DeGroote School of Medicine, continuing to live on reserve and commute into Hamilton for her studies.

Upon completion of her medical degree, Dr. Montour chose the family medicine residency program at McMaster University because she knew she wanted to stay within her community. The family medicine program found a preceptor for Amy in her home community while continuing to expose her to the larger tertiary systems in the region. Upon graduation, the Family Health Team (FHT) where Amy had trained offered her a full-time contract in the clinic. Dr. Montour started her practice in July of this year, already comfortable with the patient population, referral patterns, the electronic medical record and her colleagues.

Dr. Montour indicates that training, working and living in her home community of Six Nations allowed her to maintain close community and family ties, as well as understand the challenges her patients face. She is well positioned to provide the right care to her local community.

PRIMARY CARE REFORM

The Chairs of Ontario family medicine programs began advocating for primary care reform in 1994, recommending changes to the health care system such as blended funding models, multidisciplinary care and a managed system.[7]

It is well known that a strong primary care foundation is the basis of better and more equitable health outcomes[8], which creates a healthy setting for people to "grow up and grow old."[9] The residency program expansion was interdependent with, and helped to enable, primary care reform. The province's initiatives include:

- Patient enrollment with a primary care provider;
- Interprofessional primary care organizations; and
- Physician reimbursement based on varying blends of fee-for-service, capitation and pay-for-performance.[10]

These reforms, along with the family medicine expansion output and growing numbers of nurse practitioners and physician assistants, are beginning to change the primary care landscape in Ontario in terms of reducing the number of unattached patients and improving access to care. Many of these changes were enabled by the Physician Services Agreement negotiated between the Ontario Medical Association (OMA) and the Ministry of Health and Long-term Care (MOHLTC).

Access

- Over 2.1 million patients who previously had no family doctor are now enrolled in a primary care model.[11, 12]
- Over 10.1 million Ontarians (75% of the population) are enrolled in primary care models[11], up from fewer than 600,000 in 2002.[10]
- The number of services provided during after-hours periods increased from about 1 million in fiscal 2003 to about 3.5 million in fiscal 2010.[12]
- In spite of an aging population and increasing complexity of chronic diseases, there has been a 12% decline in the rate of rostered patients presenting in emergency departments for semi-urgent and non-urgent conditions.[12]

New Models of Physician Reimbursement

- 8,221 of 11,600 (71%) family physicians in Ontario are signed up to work in a primary care model.[11] By comparison, in 2002, 94% of family physicians were paid by fee-for-service.[10]

Interprofessional Primary Care Teams

- 2,716 family physicians work in FHTs.[11]
- 276 full-time equivalent (FTE) work in Community Health Centres (CHCs).[11]
- 2,000 interdisciplinary health providers work in interprofessional teams.[11]
- In the 2012 National Physician Survey, only 1% of family medicine residents in Canada indicated an interest in working as a solo practitioner.[2]

The process of primary care renewal is still underway, but it is expected to have a transformative impact in the coming years in terms of quality of care. A number of studies are underway to assess the impact of primary care reform and help inform future strategic directions:

- 5-year longitudinal evaluation of FHTs;
- Evaluation of Family Health Group (FHG) and Family Health Organization (FHO) models; and
- A multi-stakeholder initiative to develop a comprehensive primary care performance measurement system.

ONTARIO UNIVERSITIES ALIGNED WITH ONTARIO'S ACTION PLAN FOR HEALTH CARE

The government's investment in family medicine education has created many opportunities for Ontario family medicine programs to align with Ontario's Action Plan for Health Care and transformation agenda. The community infrastructure and networks of almost 5,000 faculty and more than 1,000 trainees creates an incredible vehicle for government to influence primary care reform in Ontario.

Faster Access and Stronger Links to Family Health Care

- 2.1 million more Ontarians have access to a primary care provider.
- Family medicine programs are based in community and rural settings, which enables these communities to recruit new graduates to areas that previously lacked family doctors.
- Ontario medical schools are graduating family physicians to meet community needs by training community faculty to teach residents through a collaborative provincial faculty development initiative led by Queen's University. http://www.r-scope.ca/websitepublisher/
- Family medicine residency programs are involved with more than half of the province's Health Links, helping seniors and patients with complex needs receive coordinated, efficient and effective care.
- There are over 1,900 additional family medicine graduates able to accept new patients across the province, including through the province's program Health Care Connect.
- The Northern Ontario School of Medicine has a social accountability curriculum and is creating a sustainable physician human resources solution for the north.

Right Care, Right Time, Right Place

- Family medicine training largely occurs in an academic Family Health Team (FHT) environment, promoting interprofessional models of care with nurse practitioners, nurses, social workers, dieticians, pharmacists, etc.
- Academic FHTs provide after-hours clinics and house calls ensuring patients receive care at the right time in the right place.
- With the implementation of a dedicated Anti-Coagulation management team (Pharmacist and RN), Queen's FHT has demonstrated approximately 1,800 patient-physician visits have been saved in the clinic each year. This is based on 150+ patients being monitored monthly in the clinic, whereas the patients would previously have been seen by the physician, following the patients' visit to the lab.
- Family medicine program expansion is paving the way for more specialty training to also occur in community settings, which will help bring more specialty care to regions across the province.
- The University of Ottawa has doubled its francophone family medicine program resulting in over 20 clinical teaching practices in the region and twice as many francophone doctors serving the needs of the French speaking population.
- The Supplemental Emergency Medicine Experience (SEME) at the University of Toronto is providing continuing education to family physicians to satisfy an unmet service need in emergency departments in rural communities in Ontario. Ninety SEME modules have been developed as a shared provincial learning resource.

Keeping Ontario Healthy

- Family medicine residents are being trained in primary care quality improvement, a priority under the Excellent Care for All Act. Many residents participate in, or lead, quality improvement (QI) projects in their teaching units and FHTs.
- The Interfaculty Program in Public Health at Western University is addressing health challenges such as First Nations health, clean water, chronic disease, and maternal and child care.
- Faculty at the University of Ottawa were awarded a Program of Innovation in Medical Education (PIME) grant to determine whether implementation of the Managing Obstetrical Risk Efficiently (MOREOB) program would affect the attitudes, interests and career path of residents in offering obstetrical care in their future practices.
- Education/practice toolkits have been developed on team-based care in clinical areas such as depression and diabetes.
- A McMaster University researcher's Infant and Child Health (INCH) lab and Coordinated Approach To Child Health (CATCH) studies will help with physical development and activity related to childhood obesity.
- Family medicine residents are trained in environments that use Electronic Medical Records (EMRs), which will enable better health outcomes, improve health care by helping physicians get better clinical information, and reduce duplicate tests.

PATIENT IMPACT: Electronic Medical Records

McMaster University's eHealth innovation is developing health technology solutions that work and making them accessible and responsive to health and social service providers and patient/citizens across Canada and internationally (Figure 6).

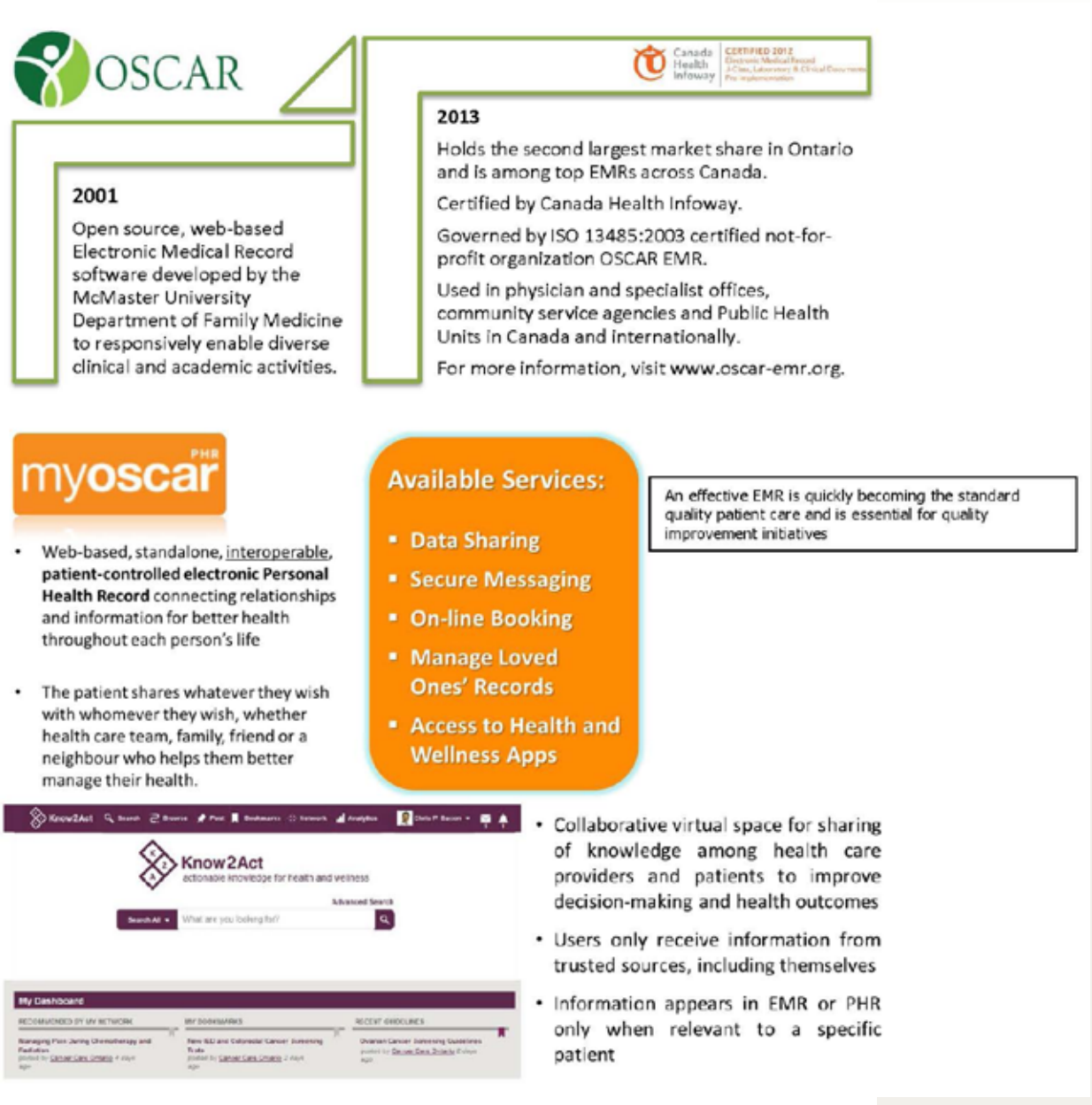


Figure 6 - Open Source Clinical Application Resource (OSCAR) Health Record System

PATIENT IMPACT:
QI Improved Immunization Rates

Queen's Family Health Team (QFHT) is a team of 23 physicians and more than 30 nurses, allied health and clerical staff caring for 14,000 people in Kingston, Ontario. More than 50 family medicine residents have clinical rotations with the FHT every year. QFHT uses the OSCAR open source EMR system.

QFHT embarked on a QI journey in 2008, framing its quality improvement plan around the Institute of Medicine's domains of quality, working with the idea that the care delivered should be safe, effective, patient-centred, timely, equitable and efficient. Some QI initiatives currently underway include: improving timely patient access to visits with residents and physicians for the increasing number of rostered patients; and collaborating with specialty colleagues in the hospitals and community to reduce 'wait-one' times from family physician referral to specialty care appointments.

Figure 7 provides an example of a QI initiative undertaken in 2010 that continues to have a very positive impact on patient immunization for seasonal influenza. In 2010, QFHT implemented a medical directive giving nurses the ability to initiate patient immunizations. In 2011, the EMR had improved search features to identify patients who needed their flu shot, and support staff was reminding patients about the importance of getting it.

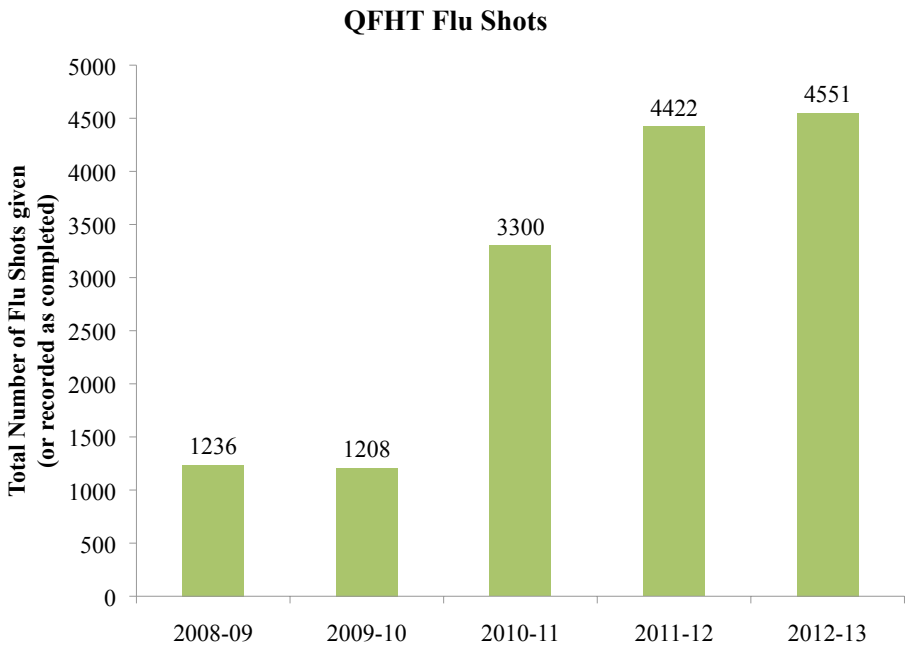


Figure 7 – Quality Improvement Project: Influenza Immunizations

PATIENT IMPACT:
QI Improving the Process for Fax Prescription Refill Requests

Since 2011, all first year family medicine residents at the University of Toronto are trained in quality improvement and must complete a QI project. Many of the family medicine teaching sites and FHTs have also been implementing QI for a number of years. The teaching site at the University Health Network Toronto Western Hospital initiated an interprofessional collaboration and community outreach project to improve the process of faxed prescription refill requests leading to increased patient, staff and pharmacy satisfaction and decreased workload (Figure 8).

Improving The Process For Fax Prescription Refill Requests Through Interprofessional Collaboration and Community Outreach

Patricia Marr*Δ, Brenda Pupo, Hyacinth Salmon, Amita Singwi*, Barbara Stubbs*, Nasser Tabatabaei, Polly Yee, Joanne Laczny, Tennile Rapley, Soumia Meiyappan, Lina Amaral
Toronto Western Family Health Team (TW FHT)
* Department of Family and Community Medicine, University of Toronto; Δ Leslie Dan Faculty of Pharmacy, University of Toronto

Background Information

- The TW FHT has experienced challenges with faxed prescription refill requests, particularly when the primary provider is away from clinic.
- TW FHT staff believed the current "Back-Up Buddy System" could be modified to address patient safety concerns, communication issues, and workload inefficiencies.

Method: IHI* Model For Improvement

What Are We Trying To Accomplish?

Improve the fax prescription renewal process

AIM Statement: Increase the frequency of the primary provider renewing their own fax prescription requests by 40% by March 2012 from the baseline

How Will We Know That A Change Is An Improvement?

- Audit of Fax Requests
- Patient Satisfaction
- # Patients who run out of medication
- Staff Satisfaction
- # Phone calls from pharmacies
- Feedback from community pharmacies

What Change Can We Make That Will Result In Improvement?

The following intervention stamp was utilized when the primary provider was away from clinic for greater than 24 hours

Message to Community Pharmacist

Dr: _____ is away from the clinic until _____

For chronic medications (excluding opioids and control substances): the pharmacist may issue a bridging supply of medication using professional judgement.

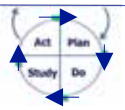
For opioids and controlled substances: please instruct the patient to book an appointment with the Family Health Team

PLEASE DO NOT SEND MULTIPLE FAX REQUESTS

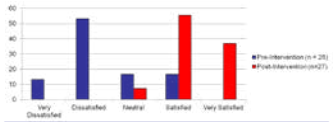
Anticipated Benefits of the Stamp:

- Decrease the need for "Buddy Coverage"
- Help ensure the primary provider refills the prescription request
  - The primary provider can check appropriateness of the Rx request
  - The primary provider can ensure patient receives proper monitoring
- Help ensure the patient does not run out of medication supply
- Decrease workload (repeat faxes, phone calls from community pharmacies)
- Improve communication with community pharmacies
- Help empower community pharmacists to practice within full scope (given new legislation RE: Rx refills)

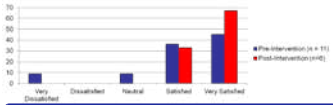
* IHI = Institute for Healthcare Improvement



Staff Satisfaction



Patient Satisfaction



Fax Prescription Refill Audit

Parameter	Pre Intervention	Post Intervention	Difference
Total # of fax refill requests received	40 faxes / 2 day period	12 faxes / 2 day period	- 28 faxes / 2 day period
Renewed by Primary Provider *	33 / 37 (89%)	10 /11 (91%)	+ 2%
Average turn around time *	1.9 days	2.6 days	+ 0.7 days

** Calculations based on the number of faxes returned for the audit*

Phone Calls From Pharmacies

Parameter	Pre Intervention	Post Intervention	Difference
Total # of phone calls from pharmacies about fax Rx refills	62 calls / week	25 calls / week	- 37 calls / week
Average	12.4 calls / day	5 calls / day	- 7.4 calls / day
Range	11 – 14 calls / day	1 – 7 calls / day	N/A

Discussion

- AIM statement was determined before baseline data collected. Pre-intervention data suggested that most prescriptions were renewed by primary provider. Therefore our initial goal may not have been realistic.
- Medications were renewed within 2 days by the TW FHT for the 2 patients who ran out of medication in the post-intervention cycle.
- Given the positive results seen in satisfaction and reduced workload – our clinic has decided to implement this stamp process clinic wide.

Sample Comments From FHT Staff

Pre-Intervention:

- "Buddy system –it's difficult to feel comfortable renewing meds when you are not familiar with the patient"
- "Get rid of numerous copies of the same fax"

Post Intervention:

- "Seems to have worked well when I was on vacation"
- "I can't begin to tell you what a load off this has been"
- "I would like to see the stamp process as a permanent part of our routine"

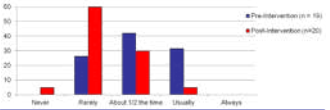
Patients Running Out of Medication

Parameter	Pre Intervention	Post Intervention
Patients who ran out of medication while waiting to get prescription refilled	3 / 11 patients (27%)	2 / 6 patients (33%)
Duration of time missed taking medication	Range: 2 days – 6 months	Range: 3 – 7 days

** Based on patient self report*

Duplicate Fax Requests

Survey of Primary Providers: How often have you received 2 or more copies of the same fax request from a pharmacy?



Feedback From Pharmacists

- 12 / 12 (100%) pharmacies indicated they liked the stamp.
- 11 / 12 (91.7%) pharmacies indicated they would provide the patient with a bridging supply of medication if needed.
- 1 / 12 (8.3%) pharmacies indicated that they would provide a bridging supply of medication "depending on the situation"
- Sample comments:
  - "I wish all clinics would follow your steps. Thanks a million."
  - "We have many patients from your clinic and this would help collaboration."

Conclusion

- Majority of medication renewals were renewed by the primary provider both pre and post intervention.
- The intervention was associated with the following benefits:
  - Improved patient, staff, and pharmacy satisfaction
  - Decreased workload (decreased phone calls, total faxes)
- Pharmacists feel comfortable providing a bridging supply of medication
- Patients still need to be accountable. Patients need to request renewals before running out of medication

Figure 8 – Quality Improvement Project: Fax Prescription Review Requests

GOVERNMENT INVESTMENT

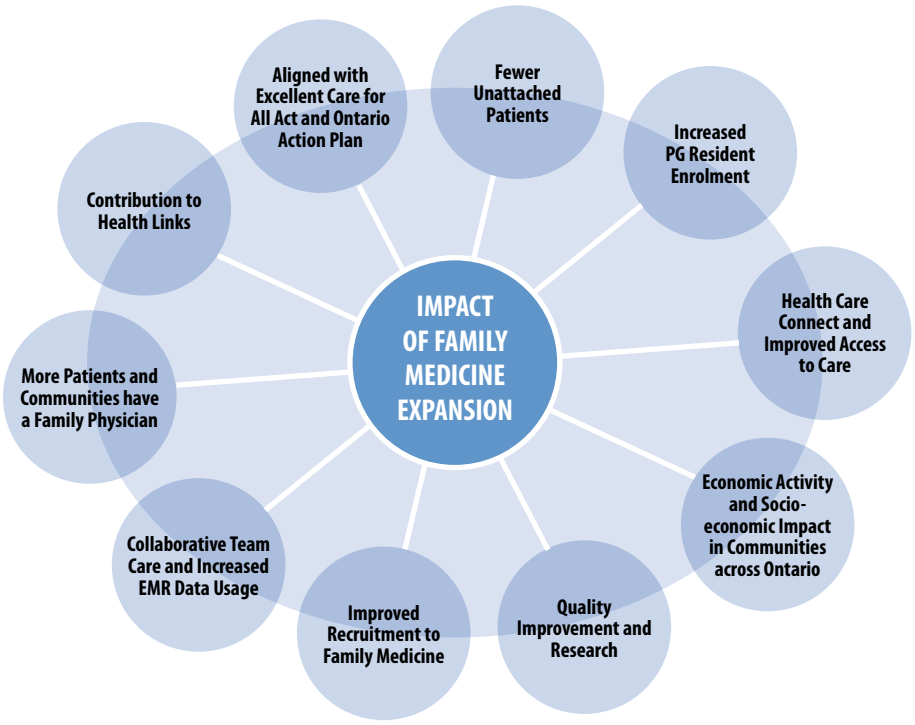
In order to enable the expansion, significant faculty recruitment and development, as well as investment in infrastructure, occurred across the province to ensure success and meet the CFPC accreditation standards of family medicine residency programs in Canada.

To accommodate the growth in residency positions, government provided funding for family medicine programs to:

- Build and/or renovate more than 50 family medicine clinical teaching sites;
- Purchase videoconferencing and IT equipment to connect sites, residents and faculty;
- Purchase simulation equipment;
- Purchase furniture and procedural equipment;
- Enable database development and creation of on-line application and faculty evaluation systems;
- Promote faculty development, training and leadership programs;
- Create one-pager clinical tools on common primary care topics;
- Promote interprofessional educational programs; and
- Create quality improvement programs.

Communities across the province benefitted from these investments and have contributed through in-kind, fundraising and donor contributions. These investments led to large increases in resident and faculty numbers and have put family medicine programs on a stable footing from both a financial and accreditation perspective. We have experienced a 180o change over ten years, from a time when family physicians were overworked and undervalued, medical students were not interested in the profession, teachers could not be recruited, family medicine program budgets were strained and program accreditation status was in jeopardy. Today we have healthy and vibrant family medicine programs that are able to train many more family doctors and quickly respond to government priorities (see Ontario Universities Aligned with Ontario's Action Plan for Health Care, pages 16-18).

IMPACT AND SCHOOL HIGHLIGHTS



A number of key success factors enabled the family medicine expansion:

- Collaboration between Ontario universities and government;
- Engagement of local communities and physicians;
- Funding from government to support residency program costs;
- Support for the Chairs of Family Medicine by the Deans of Medicine;
- Collaboration between the Chairs of Family Medicine; and
- Leadership by the OMA and government on primary care reform, codified in the Physician Services Agreement.

The Ontario faculties of medicine have been able to leverage the expansion investment towards a) other funds from communities and private donors to support expansion capital costs and establishment of Research Chairs in primary care, and b) other initiatives important to primary care such as QI and Global Health. School-by-school summaries follow, highlighting some of these wonderful initiatives.

McMaster University

Michael G. DeGroote SCHOOL OF MEDICINE

146
NEW PGY1 AND PGY2 POSITIONS ADDED

Communities Engaged in Family Medicine Residency Education

Hamilton (2 teaching sites, 6 community-based sites); Brampton; Brantford, Paris, Simcoe (Grand Erie Six Nations); Oakville, Milton, Waterdown, Burlington, Georgetown (Halton); Kitchener-Waterloo, Guelph, Cambridge (Kitchener-Waterloo); St. Catharines, Welland, Port Colborne, Niagara-on-the-Lake (Niagara); Fergus; Collingwood; Mount Forest; Owen Sound; Grimsby

The Government's Capital and Infrastructure Investments Supported

- New teaching units in Kitchener-Waterloo, St. Catharines, Halton, Burlington, Brampton and Brantford
- McMaster new core departmental administrative offices
- New Niagara McMaster Family Health Centre
- Hamilton McMaster Family Health Centre (2014)
- Redeveloped rural community sites

Community Engagement and Leveraging Funds

With the government's investment in expansion capital and infrastructure, the McMaster University Faculty of Health Sciences has been highly successful in leveraging its family medicine expansion funds to secure municipal and private donations: $750,000 in Brantford, $15 million in Kitchener-Waterloo, significant in-kind contributions in Niagara, $3 million in Halton, and $10 million in Hamilton, with a matching $10 million private donation.

For example, the City of Brantford contributed $750,000 towards the Grand Erie Six Nations Clinical Education Campus (CEC) – Brantford Centre, a new 10,000-square-foot education campus for medical residents and other health care learners. Opened Fall 2013 at the Brantford General Hospital, the Centre includes classrooms, offices, lounges and call rooms. The government and leveraged funds are enabling quality of care improvements to communities and helping them engage and retain physicians to practice in their community.

Communities Engaged in Family Medicine Residency Education

North Bay, Sault Ste. Marie, Sudbury, Thunder Bay, Timmins, Bracebridge, Cochrane, Elliott Lake, Englehart, Espanola, Gore Bay, Haileybury, Hearst, Atikokan, Dryden, Fort Frances, Geraldton, Kenora, Marathon, Nipigon, Huntsville, Iroquois Falls, Kapuskasing, Kirkland Lake, Little Current, Mattawa, Mindemoya, Moose Factory, New Liskeard, Red Lake, Schreiber, Sioux Lookout, Terrace Bay, Wawa, Parry Sound, Powassan, Richard's Landing, Sturgeon Falls, Temagami, Rural Northern Ontario for an overall total of 70 training sites

The Government's Capital and Infrastructure Investments Supported

- Created learning space within new family health teams
- Upgraded existing learner space through renovations, new furniture, office equipment and computer hardware

Meeting the Physician Human Resource Needs of the North

NOSM is a relatively new medical school and continues to undergo substantial growth. NOSM was established with a social accountability mandate to meet the community and patient needs of northern Ontario. More than half of NOSM's medical student clinical clerkship preceptors are family physicians and 61% of NOSM's undergraduate medical students choose a career in family medicine.[5]

When an area of professional need is identified in the north, NOSM responds. Family Practice Anesthesiologists (FPAs) face numerous challenges in rural settings outside the support of a tertiary center, such as infrequent exposure to crises, limited availability of support from colleagues, and limited access to professional development. NOSM responded by developing an Anesthesia Boot Camp with the goal of allowing learners to develop team leadership skills and to practice acute medicine prior to facing real-life crises. This boot camp is the result of a collaboration among faculty from the Anesthesia, Critical Care and Emergency departments at Health Sciences North, as well as the IT department at NOSM and a simulation fellow from the University of Ottawa. The program is highly regarded across Canada – most FPA residency programs send their residents annually to the NOSM boot camp. Its success has resulted in requests from other medical schools to create similar programs.

Northern Ontario School of Medicine
École de médecine du Nord de l'Ontario

12
NEW PGY1 AND PGY2 POSITIONS ADDED

uOttawa
Faculté de médecine
Faculty of Medicine

86
NEW PGY1 AND PGY2 POSITIONS ADDED

Communities Engaged in Family Medicine Residency Education

Ottawa, Renfrew, Nepean, Kemptville, Manotick, Orleans, Karp, Kanata, Rural – Almonte, Arnprior, Bancroft, Calabogie, Carlton Place, Casselman, Clarence-Rockland, Barry's Bay, St. Isidore, Pembroke, Hanover, Smith Falls, Perth, Hawkesbury, Embrun, Lanark, Osgoode, Winchester

The Government's Capital and Infrastructure Investments Supported

- New teaching unit in Pembroke
- Expanded existing teaching sites at The Ottawa Hospital (Riverside Campus and Civic site) and Bruyère Continuing Care
- Renovations to create a new teaching site in St-Vincent's Hospital
- Renovations to the community family medicine unit at the Montfort Hospital to accommodate additional residents

Program of Innovation in Medical Education (PIME)

With the benefit of expansion funding, the Department of Family Medicine Program of Innovation in Medical Education (PIME) was created to support the development and/or evaluation of projects designed to enhance undergraduate and postgraduate medical education as well as faculty development initiatives.

Full-time academic or community physicians with academic appointments in the Department of Family Medicine can apply for operational funds and/or protected time to pursue innovations in medical education. Proposed projects may be from any area of educational development, but must be relevant to primary care and align with the Department's mission. For a maximum of two years, successful candidate(s) will be awarded:

- One half-day per week protected time to conduct educational innovation projects as principal investigator;
- Access to the Educational Researcher for support in methodology and concept design;
- Access to the PIME Coordinator who will assist in the initial planning and coordination of the study; and
- Up to $7,000 in operating funds.

Since its inception, over a dozen faculty have been awarded grants, helping improve the scholarship of the department while introducing research principles to a broad range of faculty.

Queen's University
School of Medicine

Communities Engaged in Family Medicine Residency Education

Kingston-1000 Islands, Belleville-Quinte, Peterborough-Kawartha, Bowmanville-Oshawa-Lakeridge, Rural rotations in Picton, Bancroft, Trenton, Brockville, Napanee, Haliburton, Port Perry, Lindsay, and other smaller communities in Eastern Ontario

The Government's Capital and Infrastructure Investments Supported

- Renovated Queen's Family Medicine Unit in Kingston
- New teaching site in Belleville
- New teaching site in Peterborough
- New teaching site in Oshawa

Innovation Through Simulation

Queen's University has developed the innovative Nightmares Family Medicine Simulation Course. The Nightmares course provides family medicine residents with high-level resuscitation training and prepares them for their "worst nightmare" while on call. The course allows residents to practice resuscitating a simulated patient in a mock emergency room, ward or office setting. Residents participate in two full days of Nightmares boot camp at the start of their first year, followed by three half-day follow-up sessions throughout the year to consolidate their skills.

A Community-Based Health Education and Research Network

Through the family medicine expansion in Oshawa, Queen's University has partnered with Lakeridge Health Education and Research Network (LHEARN). The centre is improving health care for the citizens of Oshawa and area by increasing the number of doctors practicing in the region, reducing local wait times and focusing on preventive care and chronic disease management. Students, clinical staff, physicians and trainees test their skills in innovative high-fidelity simulation labs and challenge themselves with real world scenarios dedicated to improving patient care as well as clinical skills and teamwork.

80

NEW PGY1 AND PGY2 POSITIONS ADDED

UNIVERSITY OF TORONTO
FACULTY OF MEDICINE

196
NEW PGY1 AND PGY2 POSITIONS ADDED

Communities Engaged in Family Medicine Residency Education

Toronto (9 sites), Orillia, Port Perry, Orangeville, Mississauga (2 sites), Markham, Newmarket, Barrie, Midland, Rural teaching practice sites - Ajax, Blind River, Bowmanville, Burlington, Campbellford, Cobourg, Collingwood, Elliot Lake, Flesherton/ Markdale, Goderich, Haliburton, Kincardine, Lindsay, Lion's Head,

Stouffville, Moose Factory, Orangeville, Parry Sound, Port Perry, Red Lake, Southampton, Stayner, Wiarton

The Government's Capital and Infrastructure Investments Supported

- New teaching units in Barrie, Newmarket, Markham and 2 in Mississauga
- Expanded 9 teaching sites in Toronto, North York and Scarborough
- New core departmental administrative offices in downtown Toronto

Tackling Complex Patient Populations

Academic family physicians and specialists work with the homeless in Toronto, providing specialized health care and health-related programming in the community through the Inner City Health Associates program. The program assists women at risk, offers special facilities for the treatment of children and provides the homeless with a warm, safe place to recover after treatment in the emergency department. The program allows learners and faculty to conduct research to track, analyze and produce a better understanding of how to prevent and solve inner-city health issues.

The Departments of Medicine and Family and Community Medicine also support innovation and integration in health service through the project "Building Bridges to Integrate Care" (BRIDGES). BRIDGES aims to develop innovative models of health service delivery to reduce avoidable hospitalizations, readmissions and emergency department visits through better integration of care. The project links academics, clinicians, hospitals, FHTs, Community Care Access Centres (CCACs), LHINs and family medicine teaching practices associated with the university.

Communities Engaged in Family Medicine Residency Education

London, Windsor, Mount Brydge, Ilderton, Strathroy, Chatham-Kent, Stratford/ Tavistock, Goderich, Hanover, Petrolia, Rural communities in Southwestern Ontario

The Government's Capital and Infrastructure Investments Supported

- New teaching sites in Strathroy, Middlesex and Ilderton
- New Western Centre for Public Health and Family Medicine
- Renovated London teaching sites to improve educational facilities

Public Health and Family Medicine

The Western Centre for Public Health and Family Medicine opened in the fall of 2013, bringing together the education side of the Department of Family Medicine and Western's research division, for greater collaboration on primary care health initiatives. The building houses Western's Interfaculty Program in Public Health, which has an overall program objective of providing an academically rigorous graduate level public health education to health practitioners, managers, researchers and others engaged in public health to prepare them as future leaders in public health at national and international levels. Family medicine faculty play a large role in the new program including the initial curriculum design, as well as teaching. The Interfaculty Program in Public Health will address health care challenges such as First Nations health, clean water, chronic disease and maternal and child health.

The new Centre consolidates resources by integrating academic and community physicians, empowering leadership, supporting primary care research and facilitating a supportive learning environment. The new building brings all educational activities under one roof (resident events, academic half days, grand rounds and education meetings), while at the same time allows faculty and residents in Western's community sites to experience training and faculty development from their home sites.

Schulich MEDICINE & DENTISTRY

94

NEW PGY1 AND PGY2 POSITIONS ADDED

PHYSICIAN HUMAN RESOURCES PLANNING

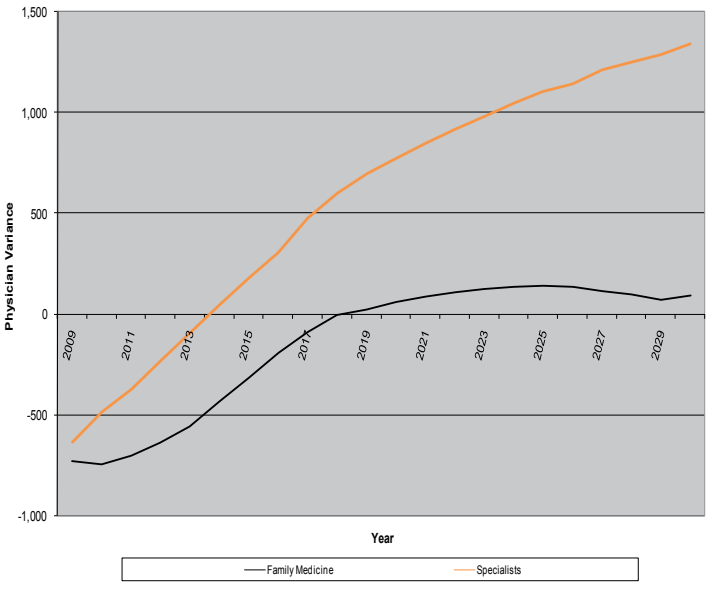
Ontario

Ontario began ten years ago to reform primary care and train more family doctors. In order to measure progress and predict ongoing needs, in 2009-10 the Conference Board of Canada developed a planning tool for the MOHLTC and OMA that translates health needs of the population into need for physician services and compares this to physician supply. A gap is quantified and then converted into a physician requirement. This "Ontario Population Needs-Based Physician Simulation Model" simulates needs at the specialty and LHIN levels and is one piece of evidence, among others, intended to help support physician human resources planning.

Beginning in 2018, the Needs-Based Model projects that Ontario may reach the right number of family physicians to address population needs. This positive overall provincial picture is predicted to hold fairly steady from about 2020 onwards (Figure 9).

HealthForceOntario

Base Simulation – Physician Variance - 2009-2030



- Over the next few years, Ontario will move from a shortage of specialists and family doctors to a point where there may be a sufficient number of physicians in the province to meet population needs.
- However, as Figure 10 will demonstrate, it is not appropriate to aggregate all specialists together.

Figure 9 – Family Medicine and Specialty Needs-Based Model at the Provincial Level

Predicting physician human resources is a tricky business. Twenty years ago at a perceived time of too many physicians, the Barer-Stoddart report "Toward integrated medical resource policies for Canada", prepared for the Federal/ Provincial/Territorial Conference of Deputy Ministers of Health (1991), made many integrated recommendations to assure an adequate and appropriate future supply of medical services for Canadians, including a recommended cut to Canadian medical school enrolment. Barer-Stoddart warned against a piecemeal approach to adopting their recommendations. Provincial governments, however, began implementing certain recommendations, e.g. reduction in medical school enrolment, but not others, e.g. introducing new complementary health care roles. Ten years later in the early 2000s, governments were faced with a physician shortage.

In Ontario, the MOHLTC and Ontario faculties of medicine have a collaborative planning framework for physician health human resources planning. Based on the Ontario results since 2003, it is evident that a lot can change for the better in ten years with coordinated, focused and strategic effort. Today however, questions are being raised about whether we once again have too many physicians. Reports in the news highlight:

- The large numbers of new MD licensees each year – 4,149 new MD registrants in Ontario in 2012, a 4% increase (MacLean's October 14, 2013). (Note: 1,363 of the 4,149 new registrants are independent practice certificates; the remaining are restricted, short duration, academic practice, academic visitor and postgraduate education certificates);
- The increasing health care costs associated with physician reimbursement - Number of doctors in Canada rising, as are payments for their services. $22 billion paid to physicians in 2012 (CIHI September 26, 2013); and
- New specialty graduates unable to find employment in their field of training or desired practice location - One in six newly graduated medical specialists can't find work: report (Globe and Mail, October 10, 2013 based on the Royal College of Physicians and Surgeons of Canada report What's really behind Canada's unemployed specialists? Too many, too few doctors?).

The reality is that there will always be an element of unpredictability when predicting future physician supply. Health human resources planning is based on a fragile mix of somewhat unpredictable factors. The Barer-Stoddart experience suggests the need to plan carefully and move cautiously.

In the case of family medicine, there are no indications that we have too many family doctors in Ontario, or that they are un- or under-employed. The question remains whether we are producing enough? The Needs Based Model signals a need to at least maintain current levels of graduates in order to potentially

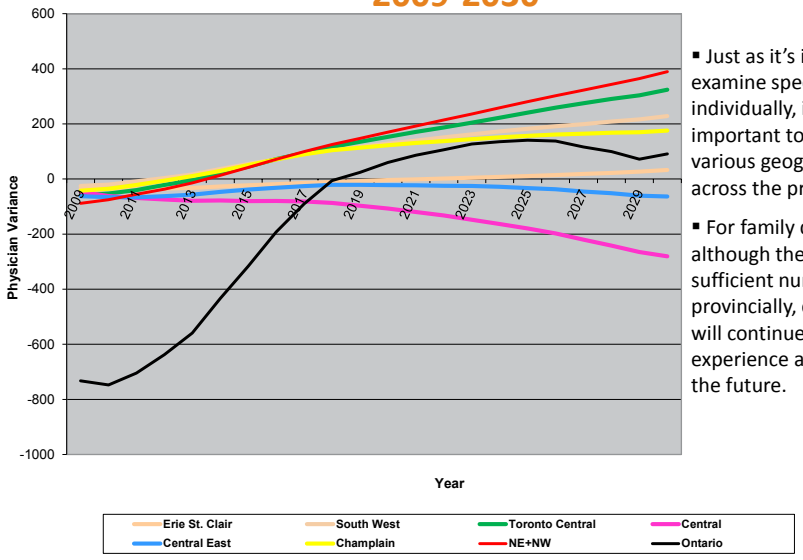
have a provincial surplus of 50-100 family physicians. Note however, that one unexpected change in the health care needs of the population or change in physician retirement rates could have a dramatic impact on supply.

Other factors that still need to be addressed include:

1) **Distribution:** The Needs-Based Model predicts that supply of family physicians may meet need at the provincial level beginning in 2018, however, there continue to be geographic discrepancies with certain LHINs still expected to experience a shortage of family doctors (Figure 10).

HealthForceOntario

Base Simulation – Family Physician Gap for Select LHINs - 2009-2030



- Just as it's important to examine specialties individually, it is also important to examine various geographies across the province.
- For family doctors, although there may be a sufficient number provincially, certain LHINs will continue to experience a shortage in the future.

Figure 10 – Family Medicine Needs Based Model at the LHIN Level

Through its Practice Ontario Program, the HealthForceOntario Marketing and Recruitment Agency works closely with medical learners, communities and LHINs to help bridge physicians to areas of need in the province.

2) **Chronic Diseases:** 1% of Ontarians account for one third of health spending, the top 5% make up 66%[13] (Figure 11). Conditions among the top 1% of users are mostly chronic disease and complex health conditions. Family physicians, working in health care teams, play a key management role helping these patients improve their health and navigate the system. For example, Health Links are helping to improve care for seniors and others with complex conditions.

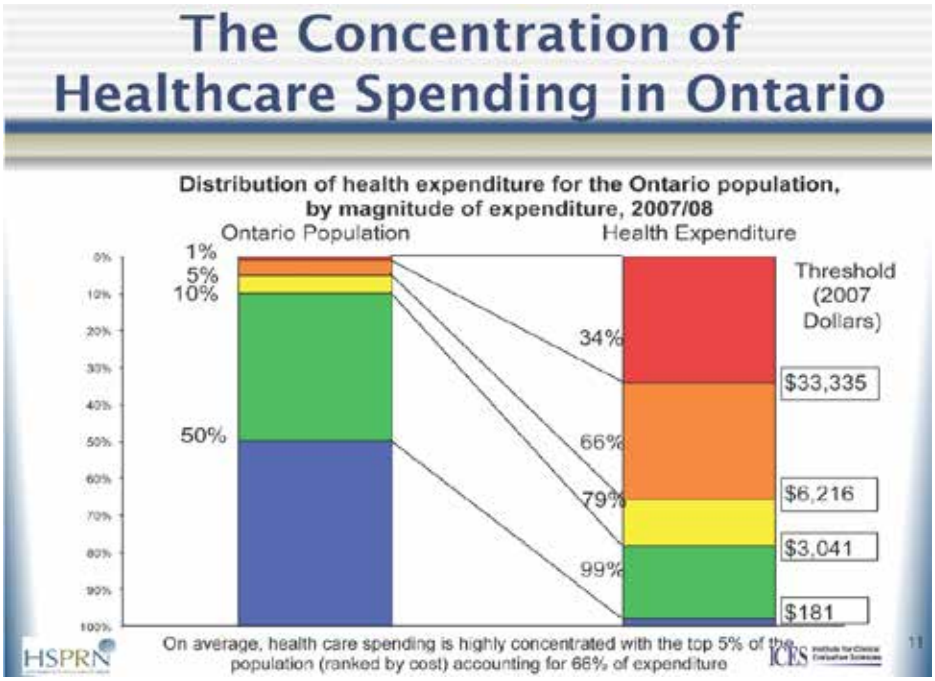


Figure 11 – The Concentration of Healthcare Spending in Ontario

3) **Access:** While primary care reform is beginning to bear fruit, there is still more to do as indicated by The Commonwealth Fund surveys. Canada ranked last of 10 wealthy industrialized countries in the proportion of sicker adults who found it easy or very easy to get medical care outside regular practice hours without going to the emergency room, and second last in primary care physicians who reported having an arrangement for patients to be seen by a doctor or nurse when the practice is closed (Commonwealth Fund 2011a, 2012). Canadian physicians also ranked second-lowest in Electronic Medical Record (EMR) use; use of online appointment scheduling and email correspondence with patients; and working with nurses, therapist or other non-physician clinicians.[10]

There is a time lag between primary care investments and results. Hutchison notes that primary care reform is unfinished business in every province and that no province has a performance measurement system in place that tracks change over time across an appropriate set of measures.[14]

United States

With the advent of the Affordable Care Act, millions more Americans will have access to health insurance in the United States. However, a critical shortage of physicians is predicted because the pipeline for production is inadequate to meet future needs.[15] Half of the shortage is projected to be in primary care specialties, yet fewer students in the United States are choosing a career in primary care than a decade ago. Schools are implementing policies and programs designed to encourage student interest in primary care. Many US schools say they have or plan to implement at least one initiative to increase student interest in primary care specialties, such as changes in curriculum, extracurricular opportunities, expanded faculty resources and training, and changes in admissions criteria.[16]

The Canadian Institute for Health Information (CIHI) indicates that Canada is a net gainer of migrating physicians; however with the predicted shortage in the US, we need to be mindful of the potential for Canadian physicians to be drawn to the US like they were in the 1990s.

THE FUTURE

Ten years ago Ontario had a shortage of family doctors, students were not interested in the profession, and family physicians worked in solo practice and were undervalued relative to specialists. An incredible response by government, the medical profession and the universities is moving the system in the right direction. We are not there yet. It is critically important to sustain and follow through with the positive early outcomes on primary care reform and the new, more socially accountable type of family doctor entering practice today: family physicians that want to work in teams, want to teach other learners and expect to use EMRs in practice.[2]

A steady flow of family medicine graduates and a vast resource of faculty and preceptors will help position Ontario to meet current and future health care needs. The reforms undertaken have put Ontario on the right track to create a strong, dynamic, responsive primary care sector, which is vital to improving Ontario's health system performance and outcomes.

How can Ontario faculties of medicine continue to work with government towards the desired future state of: a system focused on wellness; faster access to family health care that serves as the hub of the health care system; and better integration and accountability?[13]

1) Supply of family doctors is improving, but distribution continues to be a challenge. Early results indicate underserved communities are able to recruit the family medicine residents that train there. Faculties of medicine will work with government on strategic placement of educational experiences to continue to improve family physician distribution across the province.
2) Ontario family medicine programs have been integral in the roll-out of primary care reform initiatives, such as integrating resident education into Family Health Teams, promoting inter-professional team care in the training system, and aligning with government priorities and programs like Health Links and Health Care Connect. Faculties of medicine will work with government to identify strategic priorities where academic family medicine can continue to help move the government agenda, such as further spread of quality improvement training for family physicians, in line with the requirements of the Excellent Care for All Act.
3) As primary care reform continues to unfold, family medicine programs can partner with government to identify targeted initiatives to help address performance measures shown to be lacking according to the Commonwealth Fund. For example, we can identify ways for academic

family medicine teaching units to help lead system change in same-day-access and use of on-line systems for referrals, appointments and patient consults with their family physician.

4) Ontario faculties of medicine will continue to work with government on strengthened accountability and fiscal sustainability of family medicine programs in the province.

The family medicine expansion is a successful example of how Ontario universities and government can collaborate to achieve dramatic change to address physician human resource requirements and change the health care system. Our strong and vibrant family medicine educational system, with thousands of family medicine faculty and residents throughout the province, working collaboratively in teams, will continue to enable and drive the primary care system forward for years to come.

PREPARATION OF THIS REPORT

This report was commissioned by the Council of Ontario Faculties of Medicine (COFM) as an accountability document to highlight how a successful collaboration between Ontario faculties of medicine and the Ontario Ministry of Health and Long-term Care (MOHLTC) can transform physician human resources in the province.

The report was created under the leadership and contributions of the Ontario Chairs of Family Medicine and Program Managers:

- McMaster University: Dr. David Price and Tracey Carr
- NOSM: Dr. Chris Rossi and Karen Tokaryk
- University of Ottawa: Dr. Michael Hirsh and Deidre Luesby
- Queen's University: Dr. Glenn Brown and Allen McAvoy
- University of Toronto: Dr. Cynthia Whitehead (Acting), Dr. Lynn Wilson and Caroline Turenko
- Western University: Dr. Stephen Wetmore and Joanne Gibb

Mary-Kay Whittaker was hired and worked closely with Alia Karsan, Council of Ontario Universities and Allen McAvoy, Queen's University to develop and write this report. Interviews were conducted with the Chairs, Program Managers, and three COFM Deans to gather data and information about the expansion. Literature was reviewed and the MOHLTC was consulted. A special thanks to the following individuals for their expertise and contributions to the report:

- College of Family Physicians of Canada: Dr. Ivy Oandasan
- Family Physician, Six Nations Family Health Team: Dr. Amy Montour
- Ministry of Health and Long-term Care: Phil Graham, Lee Tregwin, Hussein Lalani, Susanna Tam
- Northern Ontario School of Medicine: Kim Daynard
- Ontario Physician Human Resources Data Centre: Lyn Chrysler, Dr. Neil Johnston
- Postgraduate Medical Education Office, University of Toronto: Caroline Abrahams, Teddy Cameron
- Queen's University: Tracy Weaver
- Creative Associates: Scott Nelson

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NOTES

A University / Government Collaboration

Northern Ontario School of Medicine
École de médecine du Nord de l'Ontario

Schulich MEDICINE & DENTISTRY

uOttawa
Faculté de médecine
Faculty of Medicine

McMaster University

Michael G. DeGroote SCHOOL OF MEDICINE

Queen's University
School of Medicine

UNIVERSITY OF TORONTO
FACULTY OF MEDICINE