

Obstetric medical care in Canada

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Abstract

Obstetric medicine is a growing area of interest within internal medicine in Canada. Canadians continue to travel broadly to obtain relevant training, particularly in the United Kingdom. However, there is now a sufficient body of expertise in Canada that a cadre of 'home-grown' obstetric internists is emerging and staying within Canada to improve maternity care. As this critical mass of practitioners grows, it is apparent that models of obstetric medicine delivery have developed according to local needs and patterns of practice. This article aims to describe the state of obstetric medicine in Canada, including general internal medicine services as the rock on which Canadian obstetric medicine has been built, the Canadian training curriculum and opportunities, organisation of obstetric medicine service delivery and the future.

Keywords

maternity services, general medicine, high-risk pregnancy

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Maternity care in Canada

Maternity care providers consist primarily of general obstetricians, as well as general practitioners with specific maternity training, and a much smaller cadre of independent midwives. Women with normal pregnancy may be seen and managed by any of these groups, with pregnancies complicated by maternal or fetal problems managed by obstetricians. Some of those obstetricians have additional training in maternal-fetal medicine (MFM) that includes procedural and ultrasonographic diagnostic skills.

The national professional organisation, the Society of Obstetricians and Gynaecologists of Canada (SOGC), includes membership by all types of maternity care providers as well as interested health care professionals who provide nursing or medical services to mothers and fetuses, or neonatal services to newborns. The SOGC has an extensive collection of clinical practice guidelines that are evidence-based and are directed to the needs of the entire membership, from rural to tertiary-care settings. To date, this guidance has been available free-of-charge, online; however, as of February 2016, guidelines are available only to SOGC members, similar to the availability of American College of Obstetricians and Gynecologists (ACOG) Clinical Guidelines in the United States.

Internal medicine consultative services to maternity care or any other care providers are provided by general and medical subspecialists. In this general internal medicine (GIM) model, acute admissions through the emergency department are assessed by general internists or medical subspecialists who can function in a general medical role. In tertiary-care centres where there is a 'critical mass' of inpatient and outpatient activity to support general internists, patients usually continue to receive their inpatient care in clinical teaching units run by general internists, with subspecialty consultation as required. The system is symbiotic, allowing general internists to focus (although not exclusively) on care of patients with acute illness or exacerbations of chronic illness, and subspecialists to focus on outpatient and inpatient care in their areas of particular expertise and training.

Internal medicine and obstetric medicine training

The GIM model is a rigorous training process. Four years of post-graduate training in internal medicine are required to write internal medicine exams and obtain licensure, and 5 years are required for subspecialist qualifications (including the GIM designation).

Medicine trainees complete 3 years of internal medicine prior to choosing how to spend an additional 2 years (for subspecialties, including GIM) or an additional year for internal medicine licensure. Over the 4-year period prior to writing the internal medicine exams, training includes at least 6 months on the general medical teaching unit where trainees are supervised largely by general internists who often have an area of special interest, which can be a content area such as obstetric medicine.

During GIM training, exposure to obstetric medicine is offered in half (i.e. 13/24) of Canada's tertiary perinatal centres. These individuals are internists who have received some formal training in obstetric medicine, ranging from 3 months to 4 years, and each has committed to general obstetric medicine rather than focussed activity within another medical specialty.

A comprehensive curriculum for obstetric medicine training in Canada has been created, through a process of review and synthesis of several existing sources, including influential texts, published curricula and clinical cases seen in a specialised maternity care setting.¹ The process was extensive. The preliminary curriculum underwent local validation and reformulation of educational objectives with reference to the 'CanMEDS' framework promoted by the Royal College of Physicians and Surgeons of Canada (RCPSC). This framework covers content knowledge, interpersonal skills and professionalism that are necessary for competent, compassionate and high quality internal medicine care. The then draft 'Canadian' Curriculum Content Validation Instrument, that covered 34 medical conditions in pregnancy, was distributed to a study group of 29 Canadian obstetric internists for review and comment. All respondents gave feedback

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on each of 402 curricular items, with a high level of internal agreement. A subgroup of 15 experts was then convened to review the major recommendations from the group, and achieve consensus on nine additional problematic items through iterative Delphi consensus. The final validated document is available for local adaptation and implementation (<http://gemoq.ca/wp-content/uploads/2011/08/CanCOM-competencies-for-Obstetric-Medicine.pdf>). The degree to which this has happened is not known.

Funding for obstetric medicine training can be achieved within the context of funded GIM fellowship programmes that encourage trainees to find a focus of activity. Most of these trainees complete 1 year of obstetric medicine training. For some or part of their training, many fellows venture outside of Canada to centres of expertise, including those in the United States (e.g. Brown University), the United Kingdom (e.g. Guy's and St. Thomas', London or John Radcliffe Hospital, Oxford) and/or Australasia (e.g. various university hospitals in Australia and New Zealand).

Other obstetric medicine training has been ad hoc, relying on an individual's personal goals and creativity as part of other fellowship training opportunities in clinical pharmacology or a medical subspecialty, such as endocrinology, haematology or nephrology.

Obstetric internists currently provide training opportunities in obstetric medicine to residents from non-internal medicine specialties, including general obstetrics, MFM, family medicine, haematology, neurology and anaesthesia.

Also, it must be acknowledged that considerable maternal medicine care is provided by MFM specialists who are co-located in tertiary perinatal units. These sub-specialised obstetricians are trained to diagnose, recognise the potential consequences of and have knowledge of the management of maternal diseases that are influenced by pregnancy, or that have an impact on fetal growth and development, or neonatal health. How these skills are acquired is determined by individual programmes across the country. The bulk of training is dedicated to fetal medicine (e.g. 22/24 months of training) with most maternal medicine acquired ad hoc as part of clinical care of high-risk patients, or through elective clinical rotations. The culture of individual units varies. Some MFMs work well with obstetric internists, particularly in a direct-to-subspecialty model (discussed below) or in stand-alone maternity units. However, there is more tension in other units where MFMs may perceive that the obstetric internist is offering care that can be provided by MFMs who will become otherwise deskilled if they do not provide maternal medicine care.

Obstetric medicine as a formal subspecialty

Obstetric medicine is not an official subspecialty within internal medicine, however, this may change in the future. An application is being considered for submission to the RCPSC, for creation of a new category of Royal College discipline-recognition referred to as an Area of Focused Competence (Diploma). The proposed model is that the training programme would be supported within the existing Specialty Committee of the primary discipline (GIM). Successful candidates in obstetric medicine would receive an added qualification known as a Diploma of the RCPSC or DRCPSC. Members with a DRCPSC would be known nationally, and internationally, as individuals who have sought to advance their knowledge and expertise in obstetric medicine with additional complementary skills and competencies.

The training that would be required for a DRCPSC in obstetric medicine would be similar to current training, in consisting typically of 1 year of additional training that builds on internal medicine skills. Unlike other countries, the exact duration of training will depend on how long it takes to achieve the competency-based objectives. Trainees would have to first complete their internal medicine exams and assemble a summative portfolio and be required to provide proof of ongoing maintenance of competence, as they currently do for their internal medicine fellowship of the RCPSC.

In the meantime, the RCPSC has recognised the need for skills in the area of medical complications of pregnancy. As such, the College has made mandatory 1 month of maternal medicine training during the 2-year GIM fellowship (done in addition to the 3 years of core internal medicine training), and some university programmes have chosen to extend this to a mandatory 2-month period.

Job prospects

On a practical note, mention must be made of capacity for full-time employment. Even in Canada's largest hospitals with over 7000 deliveries per year, there are few obstetric physicians (other than those who do gestational diabetes work) who do not need to supplement their obstetric medicine with other activities, be they other internal medicine work, teaching, administration or research. This is especially true in stand-alone hospitals where a cadre of obstetric physicians is needed to provide a work-force that can provide appropriate after-hours coverage and during vacations or other absences.

Obstetric medicine models of care

There are two models of inpatient and outpatient care for obstetric medicine in Canada: the 'general obstetric medicine' model and the 'direct-to-subspecialist' model. Each is available throughout the country, particularly in Western and Central Canada and Quebec, with no centralisation of care. Obstetric medicine is focussed almost entirely in tertiary perinatal units that focus on high-risk pregnancies. Canada has 24 such perinatal centres and at present, obstetric general internists are located in 13. In addition, most of these centres have various interested sub-specialists, some of them with keen interest in their area of expertise as it relates to pregnancy, most commonly diabetes mellitus, but also cardiology or renal disease for example. Other maternity centres may have individuals who can provide obstetric medicine opinions, depending on their exposure during internal medicine training and their level of comfort.

In the *direct-to-subspecialist model*, referrals are sent by the maternity care provider directly to the relevant subspecialist(s), with or without the patient being seen by the obstetric internist. S/he is most likely to be involved when either multiple subspecialists may be required or the problem is undifferentiated and the relevant subspecialist required is not clear.

In the *general obstetric medicine model*, all referrals (whether clearly within one organ system or not) are sent to the obstetric internist to assist with diagnosis and management. As outpatients or inpatients, women are assessed in a 'one-stop' shop where multi-organ system disease can be managed. Some of these clinics have dedicated allied health care members, such as pharmacists, dieticians and nurse practitioners, who further contribute to a woman's comprehensive and efficient assessment. The need for subspecialist involvement or co-management is determined by the obstetric physician in agreement with the obstetrician, MFM or referring physician. S/he liaises with existing subspecialists or makes new referrals, as appropriate. During pregnancy or postpartum, care can be shared with an existing subspecialist(s) or taken over temporarily. This is individualised and determined in part by the views of the woman, the level of interest expressed by the subspecialist and the existing relationship that the woman has with her specialist. Regardless, the obstetric internist co-ordinates care amongst all doctors involved in that woman's medical care. Many maternity care providers utilise both models, depending on their relationship with the obstetric internists and the medical subspecialists.

Referrals are taken from any maternity care-provider, i.e. midwife, family doctor, general obstetrician or MFM specialist, or any other physician or surgeon who has concerns about pre-existing or new medical issues in pregnancy. Canada has a system of socialised medicine, with all maternity care paid for. Women can self-refer to their general practitioner or midwife (with midwifery services provided in a largely

parallel system of care that is beyond the scope of this discussion). Self-referral is not possible to obstetric medicine, to whom a referral must be made by the midwife, general practitioner, obstetrician or other doctor.

In terms of the content of the consultation, women may be seen pre-pregnancy for counselling and planning, during pregnancy to optimise management and/or after pregnancy to ensure disease resolution, continuity of care and appropriate planning for subsequent pregnancy and long-term health. At minimum, general practitioners who are not providing maternity care are copied on the booking letter by the maternity care provider and obstetric medicine and other subspecialty consultants during the pregnancy. These general practitioners resume care of the woman after delivery, sometimes within days for women who require close follow-up for complicated (such as hypertensive) pregnancy, and definitely following the 6-week postnatal visit with the maternity care provider. Obstetric internists assist with this care in the days, weeks and sometimes months following pregnancy when plans need to be made regarding long-term care, such as for proteinuria in pregnancy.

Of note, a focus on postnatal care is increasing, not only as a way of transitioning the woman back to her prior care providers but also as a way to ensure that her pregnancy outcome (such as pre-eclampsia) informs future health care (such as cardiovascular risk screening). Women may be seen for a one-time consultation or for consultation and ongoing care whether or not the woman is delivering in the obstetric physician's own hospital.

The future in Canada

Obstetric medicine began in Canada approximately 30 years ago, with one or two formally trained obstetric internists. There are now more than 40 practicing obstetrical internists across the country and approximately two to four physicians each year train in obstetric medicine and pursue subsequent practice in the area. Canada's obstetric medicine physicians have been strong advocates for their area, providing training opportunities for those in other specialties and seeking active membership in regional (GÉMOQ, Groupe d'étude en médecine obstétricale du Québec), national (CSIM, Canadian Society of Internal Medicine; NASOM, North American Society of Obstetric Medicine; NASSHP, North American Society for the Study of Hypertension in

Pregnancy; and SOGC), and international (ISOM, International Society of Obstetric Medicine) societies. Hopefully, growth of obstetric medicine in Canada will be further fuelled by the pursuit of RCPSC-recognition of obstetric medicine by a formal Diploma qualification. As said at the Vancouver 2010 Olympics, 'Go Canada Go'.

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