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The baby blues

Challenges and limitations of delivering obstetrics care in rural Canada

Denise Darmawikarta (Meds 2016), Alexander Levit (Meds 2017)

Faculty Reviewers: Dr Constance Nasello, MD, FRCSC (Department of Obstetrics & Gynecology)

INTRODUCTION

Disparities in health are evident and pronounced across the Canadian urban-rural continuum. Studies documenting urban-rural differences in health status have identified several striking observations: greater prevalence of heart disease, cancers, long-term disability, diabetes, infectious diseases, and suicide and higher infant mortality rate in rural and remote communities.¹

In addition to having poorer health status compared to their urban counterparts, rural Canadians are limited to a narrower range of health care providers and services. This has been, in part, attributed to the difficulty in recruitment and retention of medical graduates.¹ Other barriers affecting access to health care services in rural communities include socioeconomic status (SES), language and cultural barriers.² These barriers contribute to delay in early diagnosis and treatment, and can make travel to health care centres extremely challenging.

One of the most pressing health care issues in rural Canada is the decline in obstetrics and maternal care services. In fact, less than half of all family physicians across Canada currently offer maternity care in their practices, compared to almost 70% in 1983.³ Specific to rural and remote regions, physician burnout and centralization of tertiary care centres and other health care services are amongst the most commonly cited reasons for suboptimal health care delivery.¹ In this review, we discuss the challenges associated with the delivery of obstetrics care in rural and remote Canada, and propose potential solutions.

MATERNITY CARE IN RURAL CANADA

HEALTH CARE PROVIDER

Obstetrics care in rural Canada is, for the most part, provided by family physicians.⁴ Consequently, most women from rural areas were more likely than urban women to have their babies delivered by a family physician. Obstetrician/gynecologists (OB/GYNs) were less likely to be present at childbirth.⁴ Further, Caesarean (C-)sections were more often performed by family physicians than specialists. Curiously, a study in the United States comparing C-section delivery outcomes between rural family physicians and OB/GYNs demonstrates no increased risks when the procedure was performed by family physicians.⁵

Surveys conducted in rural Ontario indicate that midwives can play crucial roles in filling the gap left by the shortage of OB/GYNs and family practitioners in rural areas.⁶ In areas of limited access to maternity care services, midwives can not only provide clinical care for expectant mothers, but also serve as key sources of health information and support. Today, Ontario is host to approximately 700

registered midwives,⁷ a welcomed increase from just under 300 back in 2003.⁶ Unfortunately, midwifery faces many barriers to delivering optimal care, including inadequate remuneration models, limited opportunities for continuing professional development as well as geographical barriers involving difficulty accessing transportation to travel to very remote communities.

MODE OF DELIVERY

Childbirth occurs in one of three ways: (1) spontaneous vaginal birth, (2) assisted vaginal birth (using obstetric forceps and/or vacuum extractors) or (3) C-section.

A recent Canadian Institute for Health Information (CIHI) study on hospital births reported that women from rural areas were less likely to have C-sections and more likely to undergo spontaneous vaginal birth than their urban counterparts.⁴ Interestingly, women from some remote areas, particularly those farther away from their closest local hospital, had higher rates of labour induction (ie artificially stimulating childbirth, especially in cases where prolonging pregnancy carries more risks). This has been attributed to the desire to plan the date and/or location of birth for those mothers who live in very remote communities.⁴

Not surprisingly, in rural and remote regions where C-section capability exists, hospitals are able to deliver more babies locally.⁸ Further, C-section capability is found to be associated with a lower rate of preterm births.

OUTCOMES IN RURAL OBSTETRICS

As a consequence of the deterioration of maternity care services, rural Canadian women are often forced to leave their communities in order to give birth. The issue extends beyond a matter of inconvenience; it is also a matter of safety for both the mother and baby. Childbirth therefore becomes a stressful rather than joyful event for many families. In fact, it is not uncommon for mothers to experience labour and delivery without the presence and support of their family and community members.

Klein et al further suggest that loss of maternity services in rural communities can lead to a cascade of adverse consequences not only for mothers and their newborns, but also for the communities at large.⁹ They propose that when a rural community becomes a “high outflow” community (ie one where the majority of women deliver at a facility away from their local health care centres), physicians and nurses become less satisfied and less dedicated to their own practices. Sooner or later, other aspects of women’s health care, such as preventive gynecology and prenatal care, begin to disappear, leaving the

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few remaining health care providers to cover extremely intensive call schedules. This leads to an eventual decline in physician retention and recruitment, resulting in a shortage of physicians who specialize in reproductive and women's health.⁹

MATERNAL & NEONATAL OUTCOMES

While little is yet known about the effects of declining obstetrics care in rural Canada specifically, studies from other countries that have experienced similar changes in rural and remote health care delivery elucidate a rather grim future. For instance, women in the state of Washington who travel far distances, even to an excellent urban tertiary care centre, were demonstrated to have poorer outcomes than those who receive care from local services.¹⁰ More specifically, they were 1.5 times as likely to give birth prematurely (where preterm was defined as fewer than 37 completed weeks of gestation), had 67% higher rate of complications at birth and, consequently, paid double the health care costs. A recent population-based study in British Columbia corroborates these findings, showing that rural mothers who had to travel far distances to access maternity care services were more likely to experience adverse perinatal outcomes, including higher risks of perinatal mortality and preterm births.¹¹ These associations were significant even after controlling for confounding factors, including maternal characteristics and risk factors, as well as ecological determinants of outcomes (ie level of social vulnerability and proportion of Aboriginals residing within the catchment area).

CHALLENGES IN CARE DELIVERY

As of 2011, close to 20% of Canada's population lived in rural communities, defined in the Census as centres with a population of less than 1000 and areas with fewer than 400 persons per square kilometre. For these individuals, geographic, socioeconomic and cultural barriers play important roles in their ability to gain access to health care services.

In the last decade, the closure of many rural centres providing maternal care has led to a reduction in local births across Canada. Centres that do not provide C-section services have been particularly prone to closure.¹² Many newly graduated physicians refuse to practice in remote communities as rural practice is vastly different from urban medicine. Due to the smaller number of physicians, rural medicine requires that physicians practice longer hours and provide a greater range of services, all in a relatively less accessible environment. Moreover, physicians practising in remote and rural communities have less support from allied health professionals, fewer facilities and equipment and limited opportunities for continuing education.

For many, if not most, rural Canadians, low population density, lack of transportation infrastructure, language barriers and climate conditions are only some of the most common obstacles to accessing health care. Further, socioeconomic barriers may render prescription drugs unaffordable. Lower education level also hinders the capacity to understand health-related information and therefore reduces the ability to make informed decisions with respect to health and wellbeing.

PROPOSED RECOMMENDATIONS

In light of the above discussion surrounding the limitations of obstetrics care in rural Canada, we propose several recommendations that may alleviate this growing problem:

1. Establishing more health and birth centres to decentralize tertiary care facilities, thereby providing local comprehensive maternal care in remote regions. This would increase the rates of local births, improve medical outcomes and reduce the emotional, financial and logistical difficulties faced by women that require these services.
2. Increasing medical students' exposure to rural medicine through rural placements or distant learning facilitated by videoconferencing technologies.¹⁴ Indeed, early exposure to rural maternity care played a large role in the placement decisions of current rural obstetricians.¹⁵
3. Considering the value of rotating internships which were previously abolished in the early 1990s. Rotating internships can provide new medical graduates with the broad skill set that is well suited to the practice of rural medicine.
4. Developing infrastructure to support the practice of both family medicine with OB specialization and rural midwifery by establishing flexible funding models for practicing in remote communities. This, in addition to providing further education, will allow midwives and family physicians to alleviate the burden of prenatal and perinatal care on OB/GYNs.
5. Stimulating physician interest to practice in remote areas through multiple approaches: encouragement of interprofessional health care teams, establishment of appropriate remuneration models that reflect population demand and skills required to address rural health-related challenges¹³ and use of technology to facilitate distant learning. Facilitating the development of interprofessional and collaborative health care teams would also be conducive to the provision of integrated and higher-quality care, and the diffusion of workload placed on individual physicians.¹³ Ultimately, while these approaches will require years of investment and effort to make a recognizable impact, they are intended to offer lasting improvements in both the quality and availability of rural maternity care services.

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