

Decline of obstetrical services in northern Ontario

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[[résumé](#)]

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Abstract

Objectives: To describe patterns of hospital-based obstetrics in northern Ontario and to determine if there is an increase in the number of communities opting out of hospital-based obstetrics.

Design: Telephone survey.

Methods: The maternity services of all northern Ontario hospitals in urban and rural settings north of the French River were surveyed.

Results: Of 55 general hospitals surveyed in northern Ontario, a 100% response rate was obtained. The reported number of community hospitals that do not offer hospital obstetrical care has increased 500% since 1981. Remaining hospitals are evenly divided among those offering obstetrics without local cesarean-section capability, those that have GP/FP based cesarean-section capability, those that have general surgery based cesarean-section capability and those that have obstetrician based cesarean-section capability.

Conclusions: Programs to provide family practice trainees with the skills and attitudes that they need to practise obstetrics in rural Canada must be strengthened to halt the threat to maternity care for women in rural areas.

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Résumé

Objectifs : Décrire les tendances des soins obstétriques en milieu hospitalier dans le nord de l'Ontario et déterminer s'il y a augmentation du nombre des communautés qui se désengagent des services d'obstétrique en milieu hospitalier.

Conception : Sondage téléphonique.

Méthodes : On a sondé les services de maternité de tous les hôpitaux du nord de l'Ontario en milieu urbain et rural situés au nord de la rivière French.

Résultats : Sur les 55 hôpitaux généraux du nord de l'Ontario sondés, on a obtenu un taux de réponse de 100 %. Le nombre indiqué d'hôpitaux communautaires qui n'offrent pas de soins obstétriques en milieu hospitalier a augmenté de 500 % depuis 1981. Les autres hôpitaux sont répartis également entre ceux qui offrent des services d'obstétrique sans pouvoir pratiquer sur place de césarienne, ceux qui peuvent pratiquer des césariennes grâce aux services d'OP/MF, ceux qui peuvent effectuer des césariennes parce qu'ils ont un service de chirurgie générale et ceux qui peuvent le faire grâce aux services d'un obstétricien.

Conclusions : Il faut renforcer les programmes qui visent à doter les stagiaires en médecine familiale des compétences spécialisées et des attitudes dont ils auront besoin pour pratiquer l'obstétrique en milieu rural au Canada afin de protéger les soins obstétriques en région rurale.

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The decline in family practice obstetrics is well documented. Over the last 10 years, involvement in the case room by family practitioners (FPs) has dropped from a third to just a quarter of all practitioners. The rate of decline has been even steeper in rural Canada ([Fig. 1](#)). In urban centres this loss can be mitigated by having obstetricians and other family doctors take over the case load. In all of Canada's rural areas there are only 38 obstetricians, so generalists are often the only providers of maternity care, including cesarean sections ([Fig. 2](#)). If a rural doctor opts out of obstetrics and there is no one else available to provide obstetrical care, then women are forced to travel, often while in labour, to other centres.

Studies in the United States¹⁻³ and Norway⁴ consistently document significantly poorer outcomes for communities that lack maternity services, even when the referral centre is of excellent calibre. Children of women who are forced to travel have greater rates of perinatal death and prematurity and incur higher health care costs.¹⁻⁴

Chance and Campbell⁵ surveyed all 100 hospitals in Ontario in 1988 whose doctors performed fewer than 750 deliveries during 1986-87. Ten hospitals reported that they had discontinued or were discontinuing obstetrics. Obstetricians were available at 19 of the 82 hospitals that had fully completed their questionnaires. Nineteen hospitals were without cesarean-section capability. The authors predicted, based on the reported intent of physicians, that 6 more hospitals would be without obstetrical services in the following 2 years.⁵ There has been no follow-up, so it is uncertain if the reported expectations actually came to pass.

Rourke⁶ surveyed all 88 Ontario hospitals with fewer than 100 beds, excluding those administered by larger hospitals. In 1988 he found that 65 of 80 hospitals that responded to his survey were doing more than 10 deliveries a year.⁶ In 1995, in a follow-up survey of 46 of these hospitals, he found that 9 had stopped doing deliveries. In the remaining 37 hospitals that continued providing obstetrics there were fewer family doctors doing deliveries, fewer GP anesthetists and less cesarean-section availability (Dr. James Rourke, Goderich, Ont.: unpublished data).

The current study was based on a geographical region that is mostly rural. It does, however, include urban areas in order to provide context and comprehensiveness. Neither service volume nor number of hospital beds remains constant over time. Limiting a study based on these parameters limits the interpretation, especially when survey responses are incomplete.

The region was chosen to take advantage of the fact that it had been surveyed previously by Black and Fyfe.⁷ The questionnaire was designed so that it could be applied quickly to a defined and accessible population in order to encourage high response rates. Data from Black and Fyfe's northern Ontario study⁷ indicated that in 1981 few rural hospitals lacked the ability to perform uncomplicated obstetrical care (less than 10%). This present study attempts to document the

nature of contemporary obstetrics in rural hospitals in northern Ontario and to determine if more communities have opted out of obstetrics, thereby forcing women to travel out of their communities for their obstetrical care.

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Methods

A MEDLINE search of the literature (1980-1997) was done using the key words "rural" and "obstetrics." The number of general hospital beds in a community was obtained from the 1997 Canadian Medical Directory.

Between Nov. 27, 1997, and Dec. 4, 1997, a telephone survey of all community hospitals in northern Ontario was conducted. The first 3 hospitals received a pilot questionnaire and were polled again when the final questionnaire was designed. The initial contact was with the switchboard operator who received a structured questionnaire. If obstetrics was unavailable to the community, the switchboard operator was asked what the land transfer time to the nearest maternity centre was and how many GPs were on staff. Otherwise the call was switched to the nurse in charge of maternity. The nurse was asked how many of the hospital's GPs attended deliveries and who did the cesarean sections. Those who provided cesarean section were further identified by number and specialty (if any) and the relative proportion of procedures that each did. If obstetrical services were offered and no cesarean sections were done, the road distance to the nearest centre with cesarean-section capability was recorded. If the respondent did not know the answer, the call was forwarded until someone knowledgeable was reached.

Community hospitals were divided into 5 classes according to the level of hospital service that each provided:

- level 0: no obstetrical services
- level 1a: low-risk obstetrical services but cesarean sections not available on site
- level 1b: obstetrical services provided with predominantly GP/FP based cesarean-section capability
- level 1c: obstetrical services provided with predominantly general surgeon based cesarean-section capability
- level 2+: obstetrical services provided with predominantly obstetrician based cesarean-section capability.

Analysis of variance was used to test the difference between the means of each level of hospital service.

Results

All 55 hospitals in 39 communities responded to all applicable questions. Fifteen of these communities were identified as having no local obstetrical services. All were 1.5 hours or less from the next closest community that offered the service (average 45 minutes). Six communities were identified as offering obstetrics without local cesarean-section back-up. All were 2 hours or more from the nearest centre with cesarean-section capability (average 3 hours). Differences between 2 groups in reported total medical staff or number of beds were not statistically significant (ANOVA $p = 0.5$ and 0.3 respectively), but reported distance was highly significant (ANOVA $p < 0.001$).

Five (13%) communities offered cesarean sections, primarily performed by GPs. One of these communities (Sioux Lookout) had 2 hospitals that provided obstetrics. In an additional 7 communities cesarean sections were done primarily by general surgeons. There were 6 communities that had obstetricians. General characteristics of all 5 types of community hospital are listed in [Table 1](#). Overall, 48% of rural GPs/FPs with hospital privileges were reported by obstetrical nurses as attending deliveries.

Discussion

A primary finding of the study was that 15 communities no longer offer obstetrical care in their local hospitals as opposed to the situation in 1981 where only 3 hospitals in the same area did not offer obstetrical care.⁷ This study confirms an alarming trend that may threaten the health of rural women.

In examining the characteristics of these hospitals the only statistically significant difference from the next group (1a) was the reported distance to the next obstetrical unit. It may be that in urban areas local proximity to alternative obstetrical care providers may encourage a given doctor to stop and in rural areas proximity of another hospital with a maternity service may encourage a given hospital to stop.

Blind River, 45 minutes from Elliot Lake (level 1b), may exemplify the decline in hospitals offering obstetrics where the transfer time to the next closest hospital offering obstetrics is less than 1.5 hours. In 1984, local Blind River physicians decided to stop offering obstetrical services. Many reasons were offered, among them the argument of safety. Although the hospital board and

community were outraged, several organizations, including the Ministry of Health, came out in support of the closure. The reasons for stopping maternity services can be many, and it is sometimes difficult to extract the real reason from the "spin" that is generated to placate the unhappy community. The stress of maternity care on one's lifestyle is not insignificant. Unlike city FPs, rural doctors are typically already on call at high frequency to cover emergencies: obstetrics is yet another commitment.

Despite Black and Fyfe's eloquent study⁷ that underlined the safety and viability of level 1a hospital obstetrical services in northern Ontario, the Blind River example was used to support the withdrawal of obstetrical care in nearby Espanola and in Petrolia in southwestern Ontario. Unfortunately, once women become used to travelling while in labour to "safer" hospitals, and local nurses and physicians lose confidence and experience, it can be very difficult to resume obstetrical services.⁸

For Little Current, Ont., there was a different outcome from that of Blind River. A personnel shortage in conjunction with the retirement of the surgeon threatened closure of obstetrical services on the island. This would have forced 100 women annually to travel up to 3 hours to Sudbury for their maternity care. In an effort to provide a sustainable service a group of 5 doctors combined the rota for emergency department and obstetrics for Manitoulin Island, with shared prenatal care.⁹

The characteristics of the hospitals in Blind River and Little Current are similar in terms of medical personnel and hospital size. The major difference, as with other level 0 and level 1a hospitals, is in the distance to the next available obstetrical unit. Although travelling a few minutes probably won't make a difference, the studies on women forced to travel further for maternity care¹⁻⁴ makes one worry about the safety of more distant care. A pressing research question is how close must a community be to another hospital providing obstetrical services for the 2 services to be safely consolidated? Would it be safe to close the obstetrics unit at Little Current or was the Blind River decision at the limit of safety?

The loss of maternity services is not inevitable and irreversible. In Marathon, Ont., obstetrical services were closed basically due to a lack of personnel. By the fall of 1995 a single doctor was providing care for a community of 5500 people. Marathon is 3 hours by road from Thunder Bay, Ont., and a minimum 2-hour transfer time by air. Impending crisis led to the formation of the Doctor Crisis Coalition Committee that acted at the political level to achieve success in quality-of-life issues, finances and obtaining professional support to help retain physicians (Dr. James Rourke, Goderich, Ont.: unpublished data).¹⁰

The Coalition Committee was able to attract 5 new doctors, including 2 with an interest and extra training in obstetrics. Restarting the program at a level 1a hospital has allowed them to set up new policies and protocols, most of which were derived, where applicable, from national guidelines. They have had excellent community support and one of the doctors wrote to me saying that, so

far, they have had 52 deliveries, only 2 of which had to be transferred out.

Data from Australia,¹¹ New Zealand¹² and Canada⁷ demonstrate the safety and desirability of situations such as Marathon. The recent "Joint position paper on rural maternity care" endorses care in rural centres even if they might lack cesarean-section capability.¹³ The question that is most pressing is to determine if shutting down obstetrical units will be associated with future bad obstetrical outcomes in Canada as elsewhere.¹⁻⁴ Which communities would do better with local cesarean-section support? The second research challenge is to study methods of training and patterns of practice that encourage sustainable and increased levels of physician participation in obstetrical care.

The strength of the present study is that the survey represents a comprehensive sample with a complete response rate. Its weakness is mostly based on its narrow focus. Regional variations of physician participation in obstetrics across Canada, as well as hospital distribution, may limit application of these results beyond the region studied.

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Conclusions

In northern Ontario, declining physician participation in obstetrics has been associated with a 500% increase in the number of community hospitals that report a lack of elective obstetrical care since 1981. The communities with remaining maternity services are evenly divided among communities that have an obstetrician(s), those that rely primarily on a general surgeon(s) to do cesarean sections, those that depend on a family doctor(s) to do cesarean sections and those that practise obstetrical care without on site cesarean-section capability. There is a great need to strengthen programs to provide family practice trainees with the skills and attitudes that they need to practise obstetrics in rural Canada.

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