Sustaining rural maternity care —
Don’t forget the RNs

Introduction: Registered nurses provide intrapartum care to women who choose to have their babies in hospital. Considering the current national shortage of nurses, the ability of registered nurses to continue to care for women, especially in small rural hospitals, is a critical concern.

Purposes: The purposes of the study were 1) to conduct a systematic review of the maternal–child–nursing literature in rural locations; and 2) to identify one rural Ontario hospital where nurses and physicians deliver care to women with low-risk pregnancies, and then conduct an institutional ethnography to understand the enablers and barriers to low-risk rural maternity care.

Methods: A literature search was conducted to determine the state of rural registered nurses; and a telephone survey of 25 rural Ontario hospitals was undertaken to locate a hospital in which an institutional ethnography study could be conducted.

Results: Registered nurses in rural areas are more likely to be multi-specialists than generalists because of the need to adapt to emergencies across the life continuum. To care for pregnant women and their families, registered nurses require many of the same considerations that physicians have outlined: access to continuing education, appropriate call-back schedules, support from other health care professionals and administrators, and a value system that respects their expertise. Results from the ethnography of one Ontario health care institution revealed that when these aforementioned considerations are addressed, registered nurses are able to provide safe, comprehensive low-risk care in a rural maternity programme.

Conclusions: Registered nurses play an important collaborative role in maternity care. We need Canadian data on registered nurses so that we can educate, recruit and retain them to care for women with low-risk pregnancies in rural and remote areas of Canada. Nursing services should be reviewed. Collaborative care models integrating newer professionals such as midwives, as well as understanding the role of doulas, may help in developing sustainable care to rural women.
Maternity services in Canada are in crisis. In Canada, the most common reason to be admitted to hospital is to give birth, and yet maternity services are the very services that seem to be in real jeopardy. The 2002 Future of Maternity Care in Canada Conference highlighted many issues, including ensuring that a collaborative practice be implemented in undergraduate education programmes, that medicolegal issues be addressed, and that women should be cared for in an appropriate setting (i.e., at home, or at a level I, II or III facility). Urban areas are having problems recruiting and retaining staff, but rural and remote areas are experiencing acute shortages — now. Physician shortages have been well articulated, and some steps are being taken to remedy the situation. However, there are little systematic data to describe the current rural maternity registered nurse (RN) shortage. Human resource management is not using nurses effectively, and there is not enough money available to hire nurses.

We conducted a systematic review of the maternal–child–nursing literature in rural locations, and then we identified one rural Ontario hospital where nurses and physicians deliver care to women with low-risk pregnancies and conducted an institutional ethnography to understand the enablers and barriers to low-risk rural maternity care.

**Methods**

**Literature review**

A comprehensive literature search, using such key words as rural maternity, rural nursing and rural obstetrics, was completed by accessing standard databases (MEDLINE, PubMed and CINAHL), government documents, and rural Web sites in Canada and internationally. However, because health care is funded provincially, we began our work on rural maternity care by focussing on one Canadian province. In this paper, the findings and supporting literature are derived mainly from the experience in Ontario.

**Institutional ethnography**

An informal telephone survey by the authors identified 25 rural Ontario hospitals that provide maternity services. One hospital from these 25 was chosen for the research project; it was picked for the project because the maternity unit had been threatened with closure. Institutional ethnography was the methodology used, because it aims to answer questions about how everyday life is organized. It allows the researcher to use a number of methods, including interviews and focus groups, to collect data. A Canadian, Dorothy Smith, developed the methodology, based on sociology, to understand the complex and often inexplicable organization of people’s lives. Working in hospitals is often politically charged, with institutional power affecting the ability of the health care team to provide care. These political influences are acknowledged in the methodology and therefore are incorporated into the data collection and analysis.

The research questions were as follows.

1. What are the qualifications and demographics of rural nurses who are currently providing maternity care in Ontario?
2. How do maternity nurses, or how can maternity nurses work in multidisciplinary teams to enhance care to birthing women in rural hospitals? and
3. What are the key policies and procedures required in order to sustain a maternity nursing practice in rural hospitals in Ontario?

Three focus groups were conducted, in which 5 RNs, 2 physicians, and 2 administrators participated at the rural institution. The discourses were tape-recorded, transcribed verbatim and analyzed, by constant comparison, for general themes. Ethical approval was granted by the Research Health Ethics Board, Queen’s University, Kingston, Ont. Administrative approval was granted by the local health organization. At the start of each session participants signed a consent form agreeing to have the discussion audio-taped.

Two conceptual frameworks guided the development of the project and analysis of results: the Critical Success Factors4 and the Model for the Evaluation of Rural Sustainability. 5 The Critical Success Factors include attitude toward childbirth, program organization, knowledge and information, connections and networking, and ability to manage change. These factors are embedded in adequate funding for a maternity program. The Model for the Evaluation of Rural Sustainability stresses being “rural-centred, but not exclusive; the linkages with larger centres and more specialized facilities and institutions would remain.” The primary goal of rural sustainability is to provide internal support and to minimize the requirement for external services and support.

**RESULTS**

**Literature review**

Maternity services in Canada are provided by physicians (obstetricians and family physicians [FPs]), nurses and, increasingly, midwives. In rural areas maternity services are provided by FPs because there are remarkably few rural obstetricians (n = 31) in Canada.6 The Janus Project7 results estimated that only 18% of FP/GPs are providing intrapartum care, but 64% are involved in prenatal, postpartum or newborn care. Midwifery services are increasing in Canada. However, there are real constraints on practice; hospitals are reluctant to grant privileges to midwives because of the lack of critical mass of midwives across Canada, because of funding mechanisms and because of a lack of models of collaborative care practice.8

Decisions to regionalize health care services in some provinces have resulted in closure of facilities, requiring specialists to move to different centres. This has resulted in a loss of capacity to maintain a maternity service, which is critical to sustaining rural communities.9 In 2002 there were 328 802 babies born in Canada,10 yet, only 11 869 RNs reported that their direct patient care responsibilities were maternal/newborn, and only 1631 of those RNs lived in rural Canada.11

It is likely that there are many RNs who provide maternity care as well as holding other nursing responsibilities within hospitals. Also, almost half of the abovementioned 11 869 RNs and half of the 1631 rural RNs are employed only part time.11 In 2002 the Advisory Committee on Health Human Resources2 recommended that “Governments, employers and unions should collaborate to increase the proportion of nurses working full-time to at least 70% of the workforce in all healthcare settings by April 2004.”

Financially, it may seem appropriate to regionalize maternity services so that birthing women and their families can be cared for with all the necessary backups available. However, it is well recognized that women with low-risk pregnancies who are cared for in tertiary settings often have high-risk management in labour, which can lead to unnecessary interventions.12 Low-risk women do not need to be confined to bed, do not need continuous fetal monitoring, and may require only minimal interventions. Low-risk women in labour do need one-on-one care from well qualified health care professionals who will monitor their labour and assess for change from low to high risk.13 When women are required to travel for care in pregnancy and birth, perinatal mortality and morbidity is increased.14

**Midwives**

International literature on rural maternity nursing practice is often not relevant to the Canadian health care system because the solutions are often geared toward using midwives, who are not available in most of rural Canada due to small numbers. In Vermont, a network of rural midwives was set up to fill the gap when physicians, particularly obstetricians, were giving up practice in rural areas.15 Models of rural care based on nurse–midwives and FPs have been proposed in New Zealand16 and the US.17 Similarly, in rural Australia nurse–midwives (more recently midwives who are not nurses are being employed) provide all maternity care.18 Problems identified by US midwives who are contemplating giving up practice include the cost of malpractice...
insurance, lack of physician backup, physician hostility, and lack of hospital privileges. These issues are often cited by Canadian midwives as barriers to setting up their practice in a rural setting.

**Rural RNs**

Very little research could be found that described rural maternity nurses’ practice or rural maternity services.

Macleod described rural RNs as multi-specialists, not generalists, because they have to be able to respond to emergencies in a number of different areas requiring specialist knowledge. Bushy, however, defined rural nurses as expert generalists. Their work often includes preparation for air evacuation, triage of multiple victims of a road accident, as well as risk assessment of women in labour. The RNs in the Bushy study described 3 areas of rural practice as unique to the setting: mobilizing limited resources and backup, coping with the realities of practice, and working with physicians.

In rural settings, the maternity RN may be the only nurse on a particular shift who has any experience in intrapartum care. In urban settings there are more likely to be a number of nurses with whom the primary maternity nurse can consult.

During a woman’s labour, a single RN may have to organize backup care for other patients, provide support to other nursing staff, and consult with a physician for routine orders, as well as provide one-on-one care for the labouring woman. If one of these activities is problematic, then the ability of the RN to provide one-on-one care and adequate monitoring of labour will be jeopardized. As an Alberta nurse explained in Shellian’s paper: “It is not uncommon for the rural nurse to begin the shift in the ER, assist in the delivery room at noon and perhaps end the shift providing one-to-one nursing care for a child with a severe asthmatic episode.”

There are many anecdotes of RNs who simply don’t feel safe to practise because they can’t keep up their skills. Perhaps the nurses who stay in practice are more resilient, resourceful, adaptable and creative. RNs in rural practice settings consistently identify the importance of collaboration. An Australian study ranked “being part of a team” as the most important factor that influenced an RN’s decision to stay in rural nursing.

Rural maternity nursing can be very satisfying because it is likely that women with low-risk pregnancies will have minimal intervention and experience a joyful, normal birth. Registered nurses spend time with women, provide intermittent auscultation rather than continuous monitoring, encourage women to be mobile and support them in labour, therefore increasing the likelihood that they will have a normal birth.

**Institutional ethnography**

The hospital chosen for study employs 44 RNs: 14 full-time positions, 16 part-time and 7 job-shares. Eight maternity nurses, who range in experience from 6 months to over 20 years of working in the hospital, provide intrapartum care. Two other nurses who have worked in maternity now have positions in the emergency department and occasionally provide maternity care. The maternity service provides intrapartum care to approximately 70 women each year. The staff estimate they care for 45% of those living in their community. In the view of the staff, the reasons why women do not choose to have their babies in the local institution include the following: the women live at the edges of the county and are closer to an urban hospital; their FP does not admit to the institution or does not provide maternity services; and women prefer to have their babies in a tertiary setting. When there are no maternity cases in the institution, the nurses provide nursing care to other in-patients, which is approximately half of their shift time. One-on-one care in active labour (defined as 4 cm or more cervical dilation) is a cornerstone of the service. With approximately 70 births a year it is rare to have more than one woman in active labour at the same time. Efforts are made to find a second nurse to be present at the birth in case resuscitation of the infant or extra care of the mother is required.

On a day-to-day basis, nursing staff are assigned a patient load, but if they know a woman in labour may be coming in they will be ready to transfer care to another nurse. The physicians regularly provide an updated list with names and a hint list with useful tips about anticipated events (e.g., the woman had a fast labour with her first child, or, she is a nervous first-time mother). The hint list is used to determine if the physicians should be called immediately or whether they will come in later. The physicians stated that they always come in as soon as they are called to assess labour if the mother is not their own patient in order to develop a professional relationship. Four FPs provide maternity services for their own patient roster. They provide coverage for each other only when one of them is out of town.

One of the 4 FPs is also an anesthetist and
administers approximately 5 epidurals a year. There is no surgery on site; women requiring a cesarean section are transferred to an urban hospital. Transfer time is approximately 30 minutes to 1 hour, depending on weather and ambulance availability. Although births are usually spontaneous, the physicians may use vacuum extraction on occasion and, rarely, outlet forceps.

One physician perceived the growing trend toward cesarean section as the single-most important barrier to maintaining a rural practice. It was her belief that there may come a time when 50% of women choose to have a cesarean, and physicians will be powerless. “Fifty percent of women would have had an elective section. . . . It is big in the obstetric literature. . . . Several years ago I remember [name of physician] bringing it up more as a devil’s advocate thing . . . but now they are not laughing. . . . I think they are discussing it in a serious way — as being a reasonable option.” She believes that facilities without cesarean section capability will close, and the effect on rural Canada would be devastating.

Midwives and doulas

Both the nurses and physicians at this institution did not believe there was a need or space for midwives or doulas. Midwives, in the opinion of the physicians, would not be able to have a full-time practice without taking away almost all of their patients, and this would lead to feeling that they, the physicians, would not remain competent. The scope of practice of midwifery is not well understood, and the nursing staff in particular had not had good experiences working with midwives. Doulas have caused considerable anxiety to the nursing staff in the past, and nurses claimed it was “a nightmare.” As one nurse explained, “It was very hard to keep a civil professional thought in your mouth. . . . everything you would say, this doula would contradict, and right in our face.”

Rural RNs

The maternity nursing staff at the study institution have current Advanced Cardiac Life Support and Neonatal Resuscitation Program qualifications. They have participated in recent fetal surveillance and labour support workshops. As part of the health care team they are actively involved in reviewing current best practice guidelines and adapting their nursing and medical protocols. The staff all recognized that some courses offered (e.g., Advanced Life Support in Obstetrics) are not always relevant in the rural context.

There were 5 key factors outlined by the RNs that the research team felt were critical to the successful long-term sustainability of this maternity unit: 1) the mutual respect for each other’s experience and caring, 2) the understanding of the importance of continuing education to maintain and enhance skills, and 3) the collaborative practice among members of the health care team.

Working relationships

The advantage of using focus groups to obtain data in this study is that the researchers could obtain a sense of the working relationships among the participants. The mutual respect demonstrated by the nurses for each other was readily apparent. The respect for clinical experience and the willingness to seek advice from each other enabled a meaningful discussion about all the issues related to rural maternity nursing practice. The nurses appeared willing to support newer members of the team who had less experience. They obviously valued the care they provided and saw maternity as a key component to health care in their hospital.

Continuing education for both nurses and physicians, including working together on best practice guidelines and attending rounds, ensures both disciplines are up to date. Both disciplines outlined the importance of meeting to discuss issues, keeping each other informed of new guidelines or recommendations, and continually evaluating their practice against commonly used practice.

The nurses were concerned about their future ability to access continuing education programmes. Nurses in many Ontario hospitals are members of a union (Ontario Nurses’ Association), which is separate from the voluntary professional association (Registered Nurses Association of Ontario). With the recent provincial union contract, it was likely that individual nurses at this hospital would have no access to funding to attend professional education programmes, such as labour support workshops.

The political action of a local community is described by Troughton as a key component to community sustainability. The collaborative relationship between the physicians and nurses appeared strong and mutually supportive. Physicians reported that they trusted the judgement of the nursing staff and vice versa. Both disciplines felt well supported by the administrative staff. The importance of relieving nurses of patient loads immediately, when a labouring woman was admit-
Discussion

Low-risk maternity care in rural settings without cesarean section capability requires a team approach, with physicians and nurses working collaboratively with due respect given to each discipline. The participants in this study clearly articulated why the team approach worked in this setting: there was genuine respect for each other. All participants believed they gave good quality care and acknowledged that their practice was vulnerable if the rates of cesarean section continue to rise. Maintaining the concept of physiological labour and birth in rural settings is a cornerstone to the critical success factors in maintaining a low cesarean section rate. Low-risk maternity care is congruent with rural settings. “Low-risk,” by definition, is physiological, with minimal intervention required.

The nurses and physicians in our study had worked with doulas and midwives. In particular, the nurses were not impressed by the perceived interference by doulas in their own ability to care for women. Recent discussion in the literature has highlighted the difficulties experienced by health care professionals who are concerned that doulas may be advising women of choices in opposition to those recommended by the professional team. Experiences with working alongside midwives raised many of the issues outlined by Rogers, including a resistance to change, professional allegiances, scope of practice of midwives and funding models. In small hospitals it may be difficult for a number of physicians to keep their own skills and, hence, their confidence. Collaborative models with midwives require trust on both sides, but there are financial, regulatory and insurance barriers that need to be overcome.

Study limitations

The results of the literature survey and the ethnography study stem from the experience in Ontario, although it is likely that the experiences may be similar across Canada. Future work will need to address a Canadian perspective.

Conclusion

For the sustainability of rural maternity care, we recommend that nursing services be reviewed. Collaborative care models integrating professionals such as midwives, as well as understanding the role of doulas, may help in developing sustainable care to rural women. Policy-makers need data about the availability of skilled nurses in order to determine the economic viability of rural maternity care. Pregnant women and their families need the support of well qualified and knowledgeable RNs. Communities need the information in order to plan services they should be offering to the populations. Much of the current data is either dated or about other health care providers, or from other countries. We need Canadian data on RNs so that we can educate, recruit and retain RNs, and physicians and midwives, to care for women with low-risk pregnancies in rural settings, close to their homes.

Competing interests: None declared.

References

Access to FPs in Newfoundland

To the Editor:

It was interesting to read the article by Mathews and Edwards on the access to a regular family physician (FP) in Newfoundland.

The data used in this study were from 1995. My colleagues and I, working at a rural community health centre (CHC), felt that the situation had changed for the worse since then. We decided to do an audit of patients presenting to our walk-in clinic/emergency department, in the last week of July 2004.

We asked 100 consecutive patients whether they had a regular family doctor; 49 said Yes, 51 said No. We asked the 49 people who claimed to have a family doctor who that doctor was; 24 identified one of the doctors at our CHC, 25 named another doctor, often 50–100 km distant. We examined the charts of the 24 who identified a doctor at our CHC; 18 indeed had a regular family doctor, the other 6 had attended to see a variety of doctors.

There has been a one-third decline in the number of permanent rural FPs in Newfoundland in the past decade (Newfoundland and Labrador Medical Association: personal communication, 2004). Rural sites are becoming increasingly dependent on locums; our site is supposed to have 5 or 6 full-time family doctors. In the past year 29 different physicians have worked here.

Although the methodology of our small audit was weaker than that used by Mathews and Edwards, we feel that the access to continuity of FP care is much less than it was in 1995.

Graham Worrall, MB BS, DRCOG, MRCGP, CCFP, FCFP
Professor of Family Medicine
Centre for Rural Health Studies
Whitbourne, Nfld.

Reference

Correction
In Dr. Stewart Harris’s Letter to the Editor regarding the Type 2 Diabetic Flow Chart, 2004 Update, reference 3 was erroneously cited as reference 2 at the end of the first sentence in the “Lipid values (p. S58–65)” section of his Letter. The sentence in that paragraph should have read: “This method of assessing risk based on 10-year risk of CVD event is outdated and was recently revised.” The correct reference is cited in Dr. Harris’s reference list. We apologize for this error.

References