

Midwifery Care in Eight Industrialized Countries: How Does Canadian Midwifery Compare?

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Abstract

Objectives: Much has been written about the status of midwifery in developing countries, yet there is limited knowledge and analysis of the role of midwifery in the provision of maternity care in the developed world. The purpose of this study was to better understand how midwifery in Canada compares with midwifery in other developed countries with particular attention to educational preparation, scope of practice, and the contribution of midwives to the overall provision of maternity care.

Methods: Eight countries were selected on the basis of comparably low maternal mortality rates (defined as < 10/100 000 live births). Document analysis and a survey of key informants were used to develop an understanding of the role of midwifery in the various jurisdictions. We then undertook an analysis of similarities and differences among models.

Results: Variations in models of midwifery exist within and among the countries studied. Midwifery in Canada is most similar to midwifery in the Netherlands and New Zealand with regard to the model of practice, continuity of care, choice of birth place and degree of autonomy.

Conclusion: Midwifery in Canada is growing, but offers a relatively small contribution to the national provision of maternity services in comparison with other countries. The growth of midwifery in Canada may play a key role in lowering intervention rates and strengthening maternity care as is evidenced in other industrialized nations where midwifery care is an integral part of maternity services.

Résumé

Objectifs : De nombreux articles ont traité de l'état de la pratique des sages-femmes au sein des pays en développement et, pourtant, nous ne disposons que de peu de connaissances et d'analyses en ce qui concerne le rôle des sages-femmes dans l'offre des soins de maternité au sein des pays développés. Cette étude avait pour objectif de mieux comprendre la façon dont la pratique des sages-femmes au Canada se compare à celle que l'on constate au sein d'autres pays développés; une attention

particulière a été portée à la préparation pédagogique, au champ d'activité et à l'apport des sages-femmes à l'offre globale des soins de maternité.

Méthodes : Huit pays ont été sélectionnés en fonction du caractère comparativement faible de leurs taux de mortalité maternelle (défini comme étant < 10/100 000 naissances vivantes). Une analyse documentaire et un sondage mené auprès de répondants clés ont été utilisés pour élaborer une compréhension du rôle de la pratique des sages-femmes au sein des divers territoires de compétence. Nous avons par la suite mené une analyse des similarités et des différences d'un modèle à l'autre.

Résultats : Il existe des variations quant aux modèles de pratique des sages-femmes au sein de chacun des pays étudiés et d'un pays à l'autre. La pratique des sages-femmes au Canada ressemble le plus à celle que l'on constate aux Pays-Bas et en Nouvelle-Zélande, en ce qui concerne le modèle de pratique, le suivi des soins, le choix du milieu de l'accouchement et le degré d'autonomie.

Conclusion : Au Canada, bien que la pratique des sages-femmes soit en croissance, son apport demeure relativement faible pour ce qui est de l'offre de services de maternité à l'échelle nationale, par comparaison avec d'autres pays. La croissance de la pratique des sages-femmes au Canada pourrait jouer un rôle clé dans l'atténuation des taux d'intervention et dans le renforcement des soins de maternité, comme l'indique l'expérience d'autres nations industrialisées où la pratique des sages-femmes fait partie intégrante des services de maternité.

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INTRODUCTION

The essential role of midwives in providing maternity care in the developing world has been documented, but little has been written about the role and contributions of midwifery in developed countries.¹ The midwifery profession in Canada is newly regulated. Until 1994, Canada had the dubious distinction of being the only industrialized nation with no formal provision for midwifery care.² Legislation to regulate midwifery was sought following the growing consumer demand for midwifery in the 1970s and 1980s, and Ontario subsequently became the first province to regulate and fund midwifery in 1994.³ With regulation

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came the development of the professional regulatory body and an education program. Other provinces followed suit over the next 10 years, and in 2009 all provinces in Canada except Newfoundland and Labrador and Prince Edward Island have regulated midwifery. There are university-based midwifery education programs in Ontario, British Columbia, Quebec, and Manitoba, and formal mechanisms for foreign-trained midwives to obtain Canadian credentials. These mechanisms have resulted in an increase in the number of practising midwives in the country.

Despite the growth of the profession in Canada and the increasing demand for midwifery services, the examination of the role midwifery plays in the health care system following regulation has been limited. The aim of this study was to compare and contrast the role of midwifery in Canada with its role in other industrialized nations.

METHODS

We sought to explore the role of midwifery in eight industrialized nations with specific attention to how models of midwifery in other countries are similar to or different from the Canadian model. Comparator countries were selected on the basis of comparable maternal mortality rates (defined as $< 10/100\ 000$ live births) and the presence of a well-established midwifery profession. We included Australia, Denmark, France, New Zealand, Sweden, the Netherlands, the United Kingdom and Canada.

We used document analysis of relevant literature and survey information from key midwifery informants in each country to develop an understanding of the role of midwifery in the various jurisdictions, and then undertook an analysis of similarities and differences among models. A convenience sample of midwifery educators and clinicians was identified through known contacts or through the professional regulating body or educational institutions in each country. Each participant completed a brief questionnaire regarding the preparation and role of midwives in her country. The questionnaire contained a combination of open- and closed-ended questions focused on models of practice, scope of midwifery care provided to women, education and training of midwives, compensation and funding of maternity services, and overall contribution of midwifery to the country's maternity care.

The information gathered through the literature review and through the survey was analyzed using descriptive statistical measures and by recognition of frequently occurring themes to compare the professional roles of midwives in Canada with those in other developed countries.

Ethical approval was obtained from McMaster Faculty of Health Sciences Research Ethics Board.

RESULTS

Of the 20 surveys sent to key informants, 15 were returned, with at least one participant from each country. The findings highlighted variations among and within the countries studied with respect to models of practice, educational preparation, and compensation. The findings are summarized in the Table.⁴⁻¹⁰

Midwifery is a regulated profession in all the countries included in the study. The long-standing history of midwifery in the countries included in the study, other than Canada, is reflected in the large number of midwives practising and the large proportion of births attended by midwives.¹¹⁻¹⁶ The respondents from some jurisdictions, such as Australia and the United Kingdom, noted that they have been dealing with midwifery shortages, and government policies promoting recruitment and retention have been seen as key strategies for improving maternity care.^{17,18}

Midwifery models of practice vary in several ways within and among the countries studied. In Denmark, New Zealand, the Netherlands, Canada, and Sweden, midwives are considered to be autonomous professionals.¹⁹⁻²¹ Midwives are generally self-employed, independent practitioners who have hospital privileges (or the equivalent). Midwives in these countries may have solo practices or work in practice groups. They consult and collaborate with other health professionals when necessary to meet any additional medical or social needs of mothers or their babies.^{20,22}

In the United Kingdom, midwives are usually affiliated with medical general practices or with hospitals.^{19,23} Most births occur in hospital and are attended by midwives. In this setting, midwives provide autonomous care, and consult and share care with consultant obstetricians when complications occur.¹⁹ In Australia, midwifery is primarily hospital-based, and there is limited autonomy. Although most women are cared for by a midwife in labour, midwives do not have admitting privileges; physicians are ultimately responsible for care, and therefore are generally called to attend births.^{18,19}

With regard to choice of birthplace, Australia, Sweden, and France offer limited choice because midwives tend to be hospital employees.^{19,24} However, Australia, the Netherlands, and the United Kingdom also offer birth centres as an option for women. At present in Canada, birth centres are available only to women in Quebec. Choice of birth place is a large component of midwifery in the United Kingdom, Denmark, the Netherlands, and Canada. If no contraindications are present, women in the Netherlands are able to choose between home or hospital birth.²¹ Although the Canadian and Dutch models are similar with respect to choice of place of giving birth, a woman who

Summary of findings compared by country

| | Australia 21 007 310 | Denmark 5 484 723 | France 61 538 322 | Sweden 9 045 389 | Netherlands 16 645 313 | New Zealand 4 173 460 | United Kingdom 60 943 912 | Canada 33 212 696 |
|--|-------------------------|----------------------|----------------------|---------------------|---------------------------|--------------------------|------------------------------|----------------------|
| Population | | | | | | | | |
| A. Workforce demographics | | | | | | | | |
| Midwives, n | 18 297 | 1430 | 18 837 | 6200 | 2300 | 2857 | 33 363 | 720 |
| Age of midwives | | | | | | | | |
| < 30 yrs | < 25% | < 25% | 25–50% | Not provided | 25–50% | < 25% | Not provided | Not provided |
| 30–40 yrs | < 25% | 25–50% | 25–50% | | 25–50% | 25–50% | | |
| 40–50 yrs | 25–50% | < 25% | 25–50% | | < 25% | 25–50% | | |
| > 50 yrs | < 25% | < 25% | < 25% | | < 25% | < 25% | | |
| % of births attended by midwives | > 70% | > 70% | > 70% | > 70% | 60–70% | > 70% | > 70% | < 10%* |
| B. Locations of practice | | | | | | | | |
| Hospital-based | X | X | X | X | X | X | X | |
| Independent community practice with access to hospital | | | | | X | X | X | X |
| Independent community practice without hospital privileges | X | | | X | | | | |
| C. Choice of birthplace available for women | | | | | | | | |
| Home | X | X | X | X | X | X | X | X |
| Hospital | X | X | X | X | X | X | X | X |
| Birth centre | X | | | | X | | X | X† |
| D. Elements of care | | | | | | | | |
| Antenatal | X | X | X | X | X | X | X | X |
| Postpartum | X | X | X | X | X | X | X | X |
| Intrapartum | X | X | X | X | X | X | X | X |
| Well newborn care | X | X | X | X | X | X | X | X |
| Well-woman gynaecology care | | | X | X | | | X | |
| First assist with Caesarean section | | | | | | | X | |
| Family planning | | | X | X | X | X | X | X |
| Community visits | X | X | X | X | X | X | X | X |
| Prescriptive authority | | | X | X | X | X | X | X |
| E. Continuity | | | | | | | | |
| Known caregiver throughout | X | X | | X | X | X | X | X |
| Philosophy of care | X | | X | | X | X | X | |
| Known care providers | X | X | | | X | X | X | |
| F. Education degree level for entry to practice | | | | | | | | |
| Undergraduate degree | X | X | X | X | X | X | X | X |
| Diploma | | | | | X | | | |
| Graduate degree | | | | | | | | |

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|--|-------------------------|----------------------|----------------------|---------------------|---------------------------|-----------------------------|---------------------------------|----------------------|
| Population | | | | | | | | |
| G. Duration education program | | | | | | | | |
| 1–2 yrs | | | | X | | | | |
| 2–3 yrs | X‡ | | | | | | X‡ | |
| 3–4 yrs | X | X | X | | X | X | X | X |
| > 4 yrs | | | | | | | | |
| H. Prerequisite to training | | | | | | | | |
| Nursing | | | | X | | | | |
| Other undergraduate level program | | | X | | | | | |
| I. Required no. births for entry to profession | | | | | | | | |
| 0–40 | X | | | | | X | | |
| 40–60 | | | | X | X | | X | X |
| > 60 | | X | | | | | | |
| J. Professional compensation | | | | | | | | |
| Private insurance | | | | | X | X | | |
| Paid directly by woman | X | | | X | X | | X | |
| Hospital employees/salaried | X | X | X | X | X | X | X | X |
| Government funded independent practitioner | | | | X | X | X | | X |
| K. Funding for maternity care | | | | | | | | |
| Private insurance | X | | | | X | | | |
| Government | X | X | X | X | | X | X | X |
| Unfunded | | | | | | | | |
| L. Funding for malpractice insurance | | | | | | | | |
| Professional Association | | | | | X | | | X |
| Hospital | X | X | X | X | X | | X | |
| Privately covered | | | | X | X | | X | |

*Percentage for provinces with regulated midwifery

†Birth centres in Quebec only

‡Shorter program following nursing education

chooses to have a hospital birth in the Netherlands has care provided by a community midwife with the assistance of a hospital-based midwife. In Canada, two midwives generally attend hospital births unless a complication arises and a temporary or full transfer of care to an obstetrician is required.

During the postpartum period, a woman in the Netherlands will receive home visits from midwives as well as maternity care assistants.²¹ Community midwives in the United Kingdom also provide postpartum care for approximately

28 days.^{20,25} Similarly, midwives in Sweden provide postpartum care, both in hospital and following hospital discharge at 72 hours postpartum. They provide community visits for six to ten weeks after delivery.²³ In Canada, midwives provide care to the mother and baby for six weeks postpartum.²⁶ As with the Canadian model, most women in the Netherlands have a final six-week postnatal examination with the midwife, at which point the period of care ends.²¹

In midwifery practice, continuity of care is understood to mean the provision of care throughout the antenatal,

intrapartum, and postpartum periods by the same midwife or a small group (< 5) of midwives. Continuity of care is an important component of midwifery in New Zealand, the Netherlands, and Canada. In New Zealand, midwives are funded to provide care throughout the maternity period, and 78% of women book with midwives.²⁷ In France, Australia, and the United Kingdom, women may see different midwives during their pregnancy, because antenatal and postnatal care may be provided by midwives in the community, and intrapartum care may be provided by hospital-based midwives the woman has not met prior to the onset of labour. However, in the United Kingdom in particular, there is an increasing demand from women and from government policy-makers to promote “continuity of carer” throughout pregnancy and delivery.²⁸

With regard to elements of care provided to women, all midwives in the selected countries offer antenatal, intrapartum, postpartum, and healthy newborn care. However, as previously discussed, in some jurisdictions the woman may see a different midwife at each of these various stages of care because midwives may specialize in specific areas of care. This is the case in France, Australia, Sweden, Denmark, and the United Kingdom. Well woman gynaecologic care is provided by midwives in Sweden, New Zealand, the United Kingdom, and some areas of Canada.¹⁷ Family planning services are provided by midwives in Sweden, the Netherlands, New Zealand, the United Kingdom, and Canada, and in these countries midwives have authority to prescribe from a limited pharmacopeia.

With regard to educational preparation for midwifery practice, most programs examined require an undergraduate degree (baccalaureate degree in midwifery). Advanced degree graduate programs in midwifery, following initial qualification, are available in Australia, New Zealand, and the United Kingdom.¹⁹ Priority is given in all nations to an even distribution of 50% theoretical and 50% clinical components during midwifery training.²⁵ Each program includes antenatal, intrapartum, postpartum, and neonatal care.²⁰ Although several of the midwifery education programs historically required a nursing background, there is now a move towards direct entry in almost every country studied.²⁵ France is unique in that midwives are required to complete one year of medical school.²⁴ The number of attended births required for entry to practice in Canada is the same as in Sweden, the Netherlands, and the United Kingdom, and higher than in Australia and New Zealand. Only Denmark has a higher birth attendance requirement.

Government funding for maternity care exists in each of the countries studied. Midwives may be compensated as hospital employees in Australia, Denmark, France, Sweden, the Netherlands, and the United Kingdom. The survey findings

indicate that independent midwifery is funded by the government or state to some extent in Sweden, the Netherlands, and Canada, but it is also funded directly by women using services in Australia, Sweden, the Netherlands, and the United Kingdom, and in Canada in areas where midwifery is not yet regulated. In some Canadian provinces midwives are funded as part of community health programs.

With the exception of Canada, midwifery plays a significant role in the provision of maternity services in all settings studied, with almost all women with a low-risk pregnancy being attended by midwives.¹⁹ For example, in the Netherlands, midwives attend just over 46% of all births.²⁰ The number of midwives in all other countries far exceeds the number in Canada; for example, in 2005, there were 18 297 registered midwives in Australia, and in 2004, there were 33 142 midwives registered in the United Kingdom.^{18,28} The number of registered midwives is the most striking difference between the midwifery profession in Canada and in the other countries examined.

In comparison with other countries, midwifery in Canada is a new profession. Currently there are 720 registered midwives throughout Canada.²⁹ The four-year baccalaureate midwifery education programs nationwide graduate approximately 100 midwives annually.²⁹ Programs in Ontario and British Columbia are beginning to offer accelerated courses to eligible candidates. Across the country, there is variation in the number of births attended by midwives. In provinces with recent legislation and funding, such as Alberta, the number is approximately 1% of the province's births; but in Ontario, midwives attend 8% of total births.²⁹

DISCUSSION

Midwifery has a long history as an integral part of the health care system in most industrialized countries.^{19,20,23} As a result, both health care consumers and other health professionals in these countries are familiar with the services offered by midwives and how midwifery interfaces with other maternity care services. Interprofessional relationships are enhanced by the clear understanding of the roles and responsibilities that come with the maturity of a profession and exposure of professional groups over time. Perinatal outcomes in these countries are excellent, further contributing to the positive view of midwifery as an established profession.²⁰

Midwifery practice in Canada is similar to midwifery practice in other developed countries with regard to continuity of care, choice of birth place, autonomous practice, and educational preparation. The proportionately small number of births attended by midwives in Canada, where midwifery

is a recently regulated profession, is significantly different from the numbers in other countries included in this study, in which midwives have a long history of providing low risk obstetrical care. In Canada, the midwifery profession's size and influence are growing, but the profession is not meeting consumer demand for midwifery services. In other nations, despite much larger numbers of midwives, shortages of midwifery resources have been seen. In the United Kingdom, for example, shortages of midwives are seen as detrimental at both an individual and an organizational level because there is evidence that these shortages lead to increased rates of intervention in labour and delivery.¹⁷

Midwives are specialists in normal pregnancy, labour, and birth. Therefore, it is logical that they should be considered as the initial providers of care for women in Canada with low-risk pregnancies, as they are in many other industrialized countries.

CONCLUSION

The findings of this study indicate that variations in models of midwifery exist within and among the countries studied. Midwifery practice in Canada is most similar to practices in the Netherlands and New Zealand with regard to the model of practice, continuity of care, choice of birth place and degree of autonomy. Educational preparation was similar across international jurisdictions.

Although midwifery in Canada is growing, the profession offers a very small contribution to the national provision of maternity services compared to the seven other countries studied. Government policy on recruitment and retention of midwives has been identified in some countries as a key strategy in improving maternity care, and growth of midwifery services in Canada may enhance national efforts to reduce interventions in labour including Caesarean section rates.

REFERENCES

- Making pregnancy safer: the critical role of the skilled attendant. A joint statement by WHO, ICM, FIGO. Geneva; 2004.
- Bourgeault IL. Delivering the 'new' Canadian midwifery: the impact on midwifery of integration into the Ontario health care system. *Sociol Health Illn* 2000;22(2):172–96.
- Government of Ontario. Midwifery Act, 1991. S.O. 1991. 31.
- Australian Demographic Statistics. December Quarter 2008. Report number: 3101.0, 2008. Australian Bureau of Statistics 2009. Available at: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0>. Accessed June 11, 2009.
- Denmark Census 2009. Statistics Denmark 2009. Available at: <http://www.statbank.dk/statbank5a/default.asp?w=1280>. Accessed June 11, 2009.
- WHO. World Health Statistics 2008: France. Available at: <http://www.who.int/countries/fra/en>. Accessed June 11, 2009.
- Largest population increase in nearly 40 years. Statistics Sweden 2008. December 18. Available at: http://www.scb.se/Pages/PressRelease____257312.aspx. Accessed June 11, 2009.
- Figures: main indicators of the Netherlands. Statistics Netherlands. Available at: <http://www.cbs.nl/en-GB/menu/cijfers/default.htm>. Accessed June 11, 2009.
- WHO. World Health Statistics 2008: United Kingdom. World Health Organization. Available at: <http://www.who.int/countries/gbr/en>. Accessed June 11, 2009.
- National population estimates: March 2009 quarter. Statistics New Zealand. May 19. Available at: <http://www.stats.govt.nz/~media/Statistics/browse%20for%20stats/nationalpopulationestimates/hotpmar09qtr/nationalpopulationestimatesmar09qtrhotp.aspx>. Accessed June 11, 2009.
- Danish Association of Midwives. Available at: <http://www.internationalmidwives.org/AboutICM/MemberAssociations/DanishAssociationofMidwives/tabid/397/Default.aspx>. Accessed June 11, 2009.
- Association Nationale des Sages-Femmes Libérales. L'exercice libéral. Available at: <http://www.ansfl.org/page.php?id=34>. Accessed June 11, 2009.
- Svenska Barnmorskeförbundet [Swedish Associate of Midwives]. About us and our association. 2008 April 1. Available at: http://www.barmorskeforbundet.se/sv/om_forbundet/in_english.html. Accessed June 11, 2009.
- World Health Organization. Core health indicators: the Netherlands. Available at: http://apps.who.int/whosis/database/core/core_select_process.cfm?country=nld&indicators=healthpersonnel. Accessed June 11, 2009.
- Royal College of Midwives. Facts and figures. Available at: <http://www.rcm.org.uk/college/media-centre/facts-and-figures>. Accessed June 11, 2009.
- Midwife: occupational skill shortage assessment. New Zealand: Department of Labour—Te Tari Mahi, 2006 December. Available at: <http://www.dol.govt.nz/PDFs/jvm-prof-mid-2005.pdf>. Accessed June 11, 2009.
- Lavender T, Chapple J. An exploration of midwives' views of the current system of maternity care in England. *Midwifery* 2004;20:324–34.
- Maternity Services Review 2009. Improving maternity services in Australia: the report of the Maternity Services Review. Health Insite, Government of Australia Department of Health and Ageing. Available at: http://www.healthinsite.gov.au/news/improving_maternity_services_in_Australia. Accessed June 11, 2009.
- Kateman H, Herschderfer K. Multidisciplinary collaborative primary maternity care project: current practice in Europe and Australia. A descriptive study. *Multidisciplinary Collaborative Primary Maternity Care Project* 2005. Available at: http://www.mcp2.ca/english/studies_reports.asp. Accessed August 4, 2009.
- McKay S. Models of midwifery care: Denmark, Sweden and the Netherlands. *J Nurse Midwifery* 1993;33(2):114–20.
- Teijlingen ER. The profession of maternity home assistant and its significance for the Dutch midwifery profession. *Int J Nurs Stud* 1990;27:2230–8.
- Kleiverda G, Steen AM, Anderson I, Treffers PE, Everaerd W. Place of Delivery in the Netherlands: actual location of confinement. *Eur J Obstet Gynecol Reprod Biol* 1991;39:139–46.
- Multidisciplinary Collaborative Primary Maternity Care Project. Final Report. Toronto; 2006.
- Forestier R. Midwifery in France. *J Nurse Midwifery* 1983;28(4):37–8.
- Nursing and Midwifery Council. Standards of proficiency for pre-registration midwifery education. London: Nursing and Midwifery Council; 2004.
- College of Midwives of Ontario. Philosophy of midwifery care in Ontario. Toronto: College of Midwives of Ontario; 2004.
- Pairman S, Pincombe J, Thorogood C, Tracy S. Midwifery: Preparation for practice. Illustrated ed. Australia: Elsevier; 2006.
- Department of Health. Maternity Matters: Choice, access and continuity of care in a safe service. London; 2007.
- Annual Report. Canadian Association of Midwives 2008:1–55. Available at: http://www.canadianmidwives.org/pdf/2008_annual_report.pdf. Accessed August 4, 2009.