BRITISH COLUMBIA PERINATAL HEALTH PROGRAM

Optimizing Neonatal, Maternal and Fetal Health

Midwifery in British Columbia

British Columbia Perinatal Health Program
Special Report / June 2008 – Revised December 2008

Co-authors:
Sheryll Dale, Manager, BC Perinatal Database Registry
Lisa Miyazaki, Provincial Perinatal Analyst, BCPHP
Terri Pacheco, Provincial Perinatal Analyst, BCPHP
Jane Kilthei, Registrar and Executive Director, College of Midwives of British Columbia

Special Report

***Midwifery in British Columbia** is a Special Report developed through the BC Perinatal Health Program's Perinatal Database Registry in collaboration with the College of Midwives of British Columbia. The goal of this publication is to provide information regarding the increasing trend of deliveries by BC registered midwives.*

About the British Columbia Perinatal Health Program

The Ministry of Health and the British Columbia Medical Association (BCMA) initiated the British Columbia Reproductive Care Program (BCRCP) in June 1988. The BCRCP became part of the Provincial Health Services Authority (PHSA) in 2001 when the government of British Columbia introduced five geographically based health authorities and one provincial health service authority. In 2007, a new organizational structure – the BC Perinatal Health Program (BCPHP) – was created to coordinate both the BCRCP and the Provincial Specialized Perinatal Services (PSPS). The BCPHP continues to work towards optimizing neonatal, maternal and fetal health in the province through educational support to care providers, outcome analysis and multidisciplinary perinatal guidelines. The BCPHP is overseen by a Provincial Perinatal Advisory Committee and has representation from the Ministry of Health Services (MOHS), the Provincial Health Services Authority (PHSA), Children's and Women's Health Centre of BC, Health Authorities, health care providers, and academic organizations.

One of the mandates of the BCRCP is "the collection and analysis of data to evaluate perinatal outcomes, care processes and resources via a province-wide computerized database". This mandate led to the development of the British Columbia Perinatal Database Registry (BCPDR), with its stated mission to collect, maintain, analyze and disseminate comprehensive, province-wide perinatal data for the purposes of monitoring and improving perinatal care. Rollout of the Registry began in 1994, with collection of data from a small number of hospital sites. Participation increased every year, resulting in full provincial data collection commencing April 1, 2000. The BCPDR is a relational database containing over 300 fields, and with complete provincial data, is a valuable source of perinatal information.

The BCPDR currently maintains records for more than 400,000 births that have been collected from obstetrical facilities throughout the province as well as births occurring at home attended by BC Registered Midwives. BC women who deliver out of province are not captured in the BC Perinatal Database Registry.

Data from the Canadian Institute for Health Information (CIHI) and matched files from the British Columbia Vital Statistics Agency complement the data elements.

The midwives of British Columbia are registered through the College of Midwives of British Columbia, which regulates the practice of midwifery under the Health Professions Act. In BC, midwives are also members of the Midwives Association of British Columbia, which is a professional body representing the midwives and the practice of midwifery in the province of British Columbia in the areas of compensation and liability insurance as well as other important issues of the profession. The other provinces where midwifery is legislated are Alberta, Manitoba, Saskatchewan, Ontario, Quebec, and Northwest Territories [1]. The philosophy of midwifery care in BC is centered on the promotion of women's health and "respect for pregnancy as a state of health and childbirth as a normal physiological process, and a profound event in a woman's life" [2]. Women are encouraged to make decisions based on informed choice in consultation with their families and care providers. Whether a woman decides to deliver at home or at hospital, midwifery care in BC centers on the safety of the birth episode with focus on the best outcomes for the woman and her newborn.

Introduction

Historically, midwifery care in Canada has faced numerous challenges as a profession and practice. Over the years, midwifery has struggled with lack of government funding and support, as well as insufficient training opportunities [3], lack of registered midwives and skepticism amongst healthcare professionals [4]. Much advancement has, however, been made in midwifery as a profession in the last decade or so. Currently, midwives have their own practices, and have privileges to admit their patients to hospital. In addition, funding is available for midwifery services in the provinces of British Columbia, Saskatchewan, Manitoba, Ontario, Quebec and Northwest Territories [1]. Midwifery practice in BC has been regulated since 1998 through the Health Professions Act, the Midwives Regulation with bylaws and policies mandated through the College of Midwives of British Columbia [2]. Although the majority of women in British Columbia still receive maternity care through their family physicians and obstetricians, there has been a rise in deliveries by registered midwives [5].

The community-based continuity of care provided by a registered midwife allows a woman to develop a trusting relationship with her midwife. As with all healthcare providers, a woman under the care of a registered midwife makes informed choices throughout her pregnancy. Midwives in BC provide maternity care to low-risk women and their newborns from early pregnancy, through labour and delivery, up to six weeks postpartum [6]. A woman can choose not only her care provider, but also her place of delivery – at home or at hospital. In addition, consultation with a physician is available should the need arise. In effect, a woman delivering under the care of a registered midwife is provided personalized, continuous, one-to-one care from the antenatal period, during labour and delivery, through to her immediate postpartum period.

This Special Report describes the trends of midwifery deliveries in the province of British Columbia with insight into how these trends have changed through a seven-year period from 2000/2001 to 2006/2007.

Methods

The data used for this analysis were obtained from the British Columbia Perinatal Database Registry (BCPDR). The BCPDR is a comprehensive, province-wide perinatal database, which contains information on maternal behaviours, practices and outcomes as well as perinatal events and care processes at a hospital, regional and provincial level. Standardized antenatal, intrapartum, postpartum and newborn data on all deliveries and births in British Columbia, as well as deliveries by registered midwives at home and at hospital are included in the database. For the purposes of this report, data from April 1, 2000 to March 31, 2007 were used and includes linked mothers and newborns (singletons and multiples), stillbirths and late terminations. The deliveries reported occurred either at home or at hospital with a BC registered midwife involved in the care of mother and newborn. The year in which the data is contained is based on the mother's discharge date.

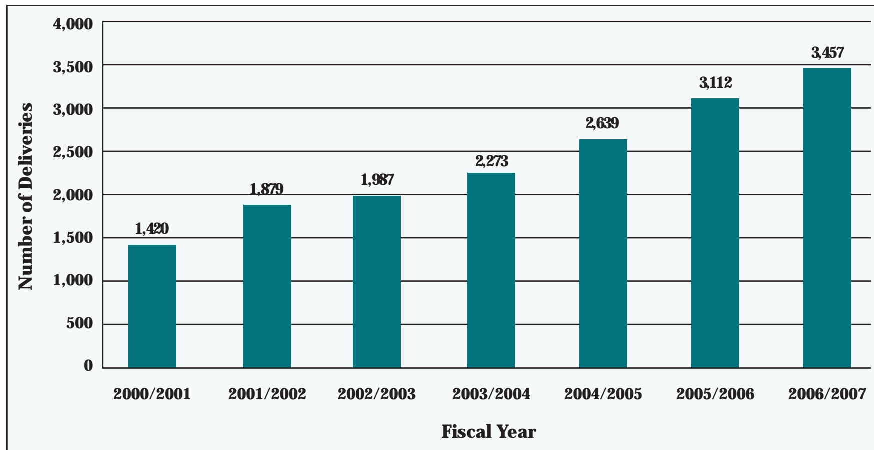
Information obtained from rosters and perinatal forms submitted by registered midwives are entered into the BC Perinatal Database Registry to monitor trends for selected indicators as well as to report on the intended place of delivery (where the woman plans to deliver) and actual place of delivery (where the woman actually delivers).

Cases where a registered midwife is involved in the care of the patient must be differentiated from cases where a registered midwife is the principal care provider physically delivering the baby. When transfer of care to a physician is required for clinical indication, a registered midwife will provide supportive care to the woman (midwifery involved case), but will not necessarily deliver the baby (midwifery attended cases). The total number of midwifery involved cases are, therefore, always greater than midwifery attended cases.

Results

Figure 1

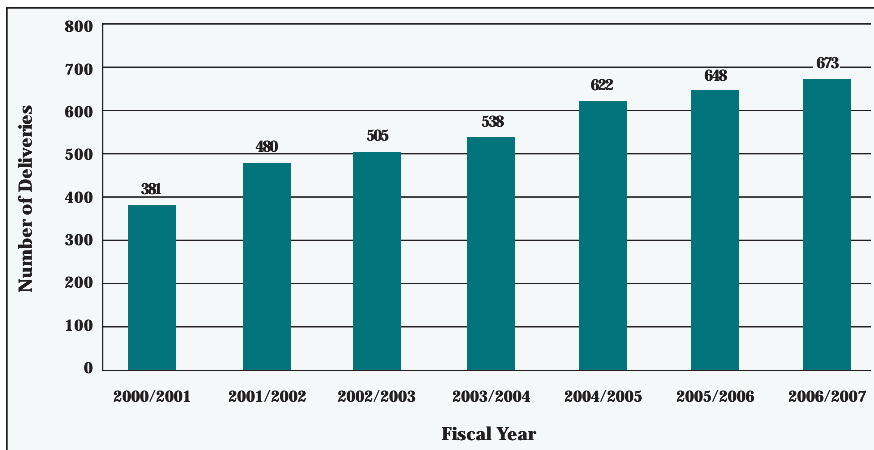
Deliveries in BC with midwifery involvement, 2000/2001 to 2006/2007



Source: BC Perinatal Database Registry

Figure 2

Deliveries at home attended by a BC Registered Midwife, 2000/2001 to 2006/2007



Source: BC Perinatal Database Registry

The number of deliveries in the province of British Columbia has increased from 40,069 in 2000/2001 to 41,688 in 2006/2007 [7]. A delivery in BC where a registered midwife is involved is a delivery where maternity care is provided by a registered midwife from the prenatal period through labour and delivery and the immediate postpartum period. Generally, the care provider physically delivering the newborn at a home delivery is a registered midwife, whereas at hospital the care provider delivering the baby can be an obstetrician, surgeon, family physician, registered midwife, or registered nurse.* The proportion of deliveries where a registered midwife was involved in the care of the woman and her newborn increased to 8.3% in 2006/2007. This represents a 143% increase since 2000/2001, when registered midwives delivered 3.5% of newborns in BC (Figure 1). These deliveries include deliveries that occur at home, or at hospital, as well as deliveries that occur at home with subsequent transfer to hospital.

Home Deliveries and Hospital Deliveries

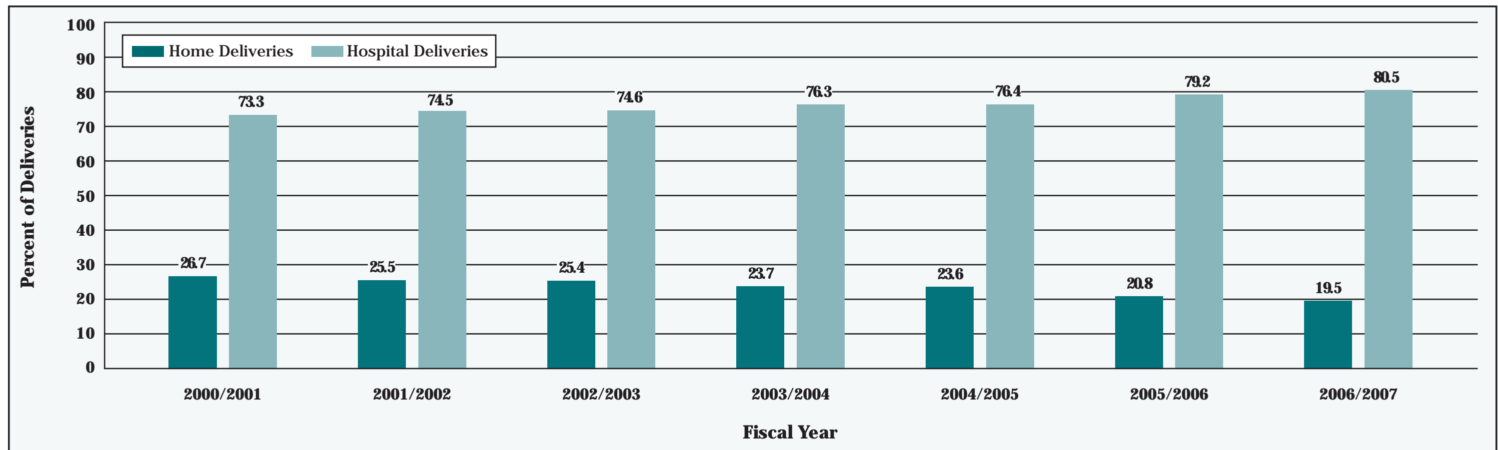
Deliveries that occur at home attended by a registered midwife, as illustrated in Figure 2, have had a notable increase from 2000/2001 (381 deliveries) to 2006/2007 (673 deliveries). Women who deliver at home and are subsequently admitted to hospital within 24 hours of delivery are included in this cohort. Women who deliver at hospital under the care of a registered midwife are excluded.

*On occasion, the primary care provider may be unavailable at the time of delivery, at which point a nurse may deliver the baby.

Deliveries attended by registered midwives at hospital are three times the deliveries attended by registered midwives at home (Figure 3). The proportion of women delivering at home with a registered midwife attending has decreased from 26.7% in 2000/2001 to 19.5% in 2006/2007, while the proportion of women delivering at hospital has steadily increased. In 2006/2007, 80.5% of pregnant women with midwifery involvement delivered at hospital compared to 19.5% at home.

Figure 3

Hospital and home deliveries attended by a BC registered midwife, 2000/2001 to 2006/2007



Source: BC Perinatal Database Registry

The care provider delivering the baby at hospital may or may not be a registered midwife. Of the hospital deliveries with midwifery involvement, care providers delivering the baby may be the family physician (general practitioner), obstetrician, surgeon, registered midwife or registered nurse. The majority of these deliveries are, however, by registered midwives (Table 1). In 2006/2007, 62.6% of hospital deliveries with midwifery involvement were by registered midwives.

Table 1

Hospital deliveries with midwifery involvement, 2000/2001 to 2006/2007

	2000/2001		2001/2002		2002/2003		2003/2004		2004/2005		2005/2006		2006/2007	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Delivered by Midwife	698	67.2	901	64.4	942	63.6	1,165	67.1	1,476	73.2	1,560	63.3	1,743	62.6
Delivered by other (GP, Obs, Surgeon etc.)	341	32.8	498	35.6	540	36.4	570	32.9	541	26.8	904	36.7	1,041	37.4
Total Hospital Deliveries	**1,039**	**100.0**	**1,399**	**100.0**	**1,482**	**100.0**	**1,735**	**100.0**	**2,017**	**100.0**	**2,464**	**100.0**	**2,784**	**100.0**

Source: BC Perinatal Database Registry

Intended Place of Delivery

During her pregnancy a woman delivering under the care of a registered midwife makes an informed choice to either deliver at home or at hospital (intended or planned place of delivery). The majority of women in BC with midwifery involvement plan to deliver at hospital (75.1% in 2006/2007) (Table 2). While there has been a steady rise in deliveries in BC with midwifery involvement, the proportion of women choosing to deliver at home decreased from 32.6% in 2000/2001 to 24.9% in 2006/2007.

Table 2

Intended place of delivery for midwifery involved deliveries, 2000/2001 to 2006/2007

	2000/2001		2001/2002		2002/2003		2003/2004		2004/2005		2005/2006		2006/2007	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Intended at Home	463	32.6	593	31.6	670	33.7	607	26.7	791	30.0	830	26.7	861	24.9
Intended at Hospital	957	67.4	1,286	68.4	1,317	66.3	1,666	73.3	1,848	70.0	2,282	73.3	2,596	75.1
Total Deliveries	**1,420**	**100.0**	**1,879**	**100.0**	**1,987**	**100.0**	**2,273**	**100.0**	**2,639**	**100.0**	**3,112**	**100.0**	**3,457**	**100.0**

Source: BC Perinatal Database Registry

If a woman plans to deliver at home, but transport to hospital is required, the midwife will ensure that a safe transport is arranged.

In 2006/2007, a total of 3,457 women delivering in BC had a registered midwife involved in their maternity care. Of these women: 2,596 planned (intended) to deliver at hospital and 861 planned (intended) to deliver at home (Table 3). On occasion, a woman who intends to deliver at home (based on decisions made in pregnancy) will actually deliver in hospital due to either clinical indications or the woman's personal preference prior to delivery. Of the women who had intended to deliver at home (861) in 2006/2007, there were 239 who actually delivered at hospital due to the aforementioned circumstances at a rate of 27.8%. This rate is variable, but has increased over the last three years from 21.6% in 2003/2004 to 27.8% in 2006/2007.

Table 3

Intended place of delivery, actual place of delivery, 2000/2001 to 2006/2007

	2000/2001		2001/2002		2002/2003		2003/2004		2004/2005		2005/2006		2006/2007	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Intended at Home														
Delivered at home	366	79.0	444	74.9	477	71.2	476	78.4	593	75.0	607	73.1	622	72.2
Delivered at hospital	97	21.0	149	25.1	193	28.8	131	21.6	198	25.0	223	26.9	239	27.8
Total Intended at Home	**463**	**100.0**	**593**	**100.0**	**670**	**100.0**	**607**	**100.0**	**791**	**100.0**	**830**	**100.0**	**861**	**100.0**
Intended at Hospital														
Delivered at home	15	1.6	36	2.8	28	2.1	62	3.7	29	1.6	41	1.8	51	2.0
Delivered at hospital	942	98.4	1,250	97.2	1,289	97.9	1,604	96.3	1,819	98.4	2,241	98.2	2,545	98.0
Total Intended at Hospital	**957**	**100.0**	**1,286**	**100.0**	**1,317**	**100.0**	**1,666**	**100.0**	**1,848**	**100.0**	**2,282**	**100.0**	**2,596**	**100.0**
Total Midwifery Involved Deliveries	1,420		1,879		1,987		2,273		2,639		3,112		3,457	

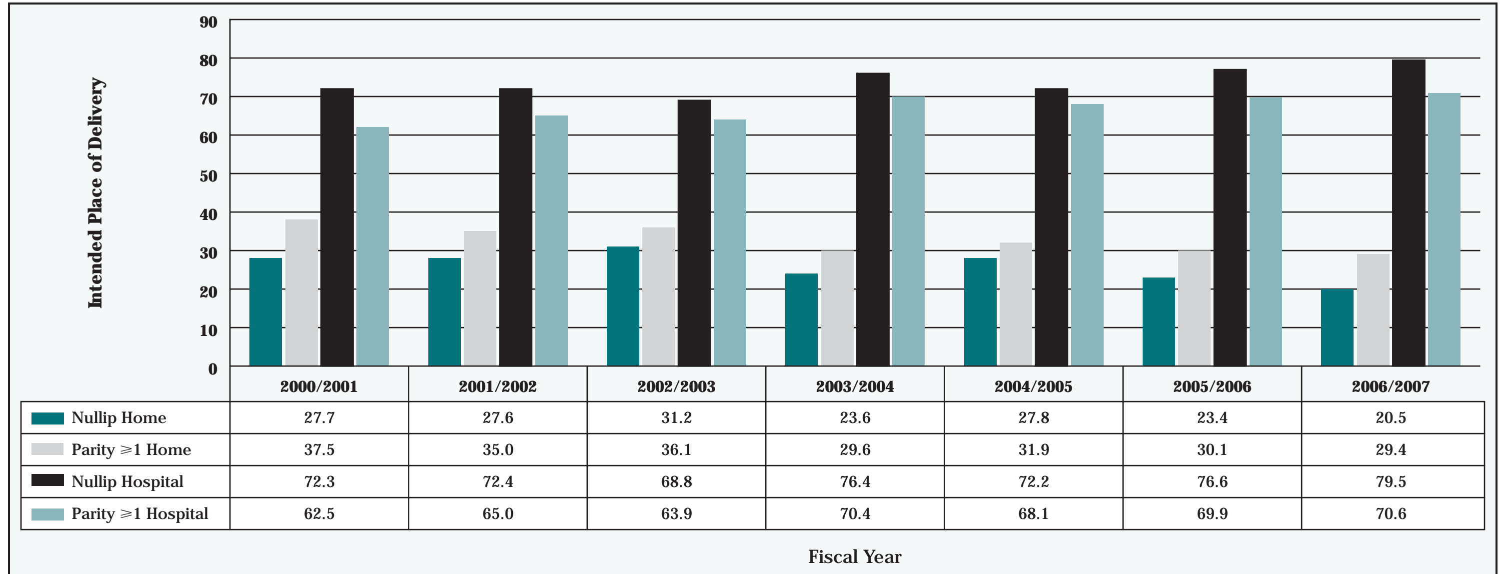
Source: BC Perinatal Database Registry

Parity

Nulliparous women are more likely than women with parity ⩾1 to plan to deliver at hospital, while women with parity ⩾1 are more likely than nulliparous women to plan to deliver at home. However, more women plan to deliver at hospital overall (Figure 4).

Figure 4

Intended place of delivery by parity, 2000/2001 to 2006/2007



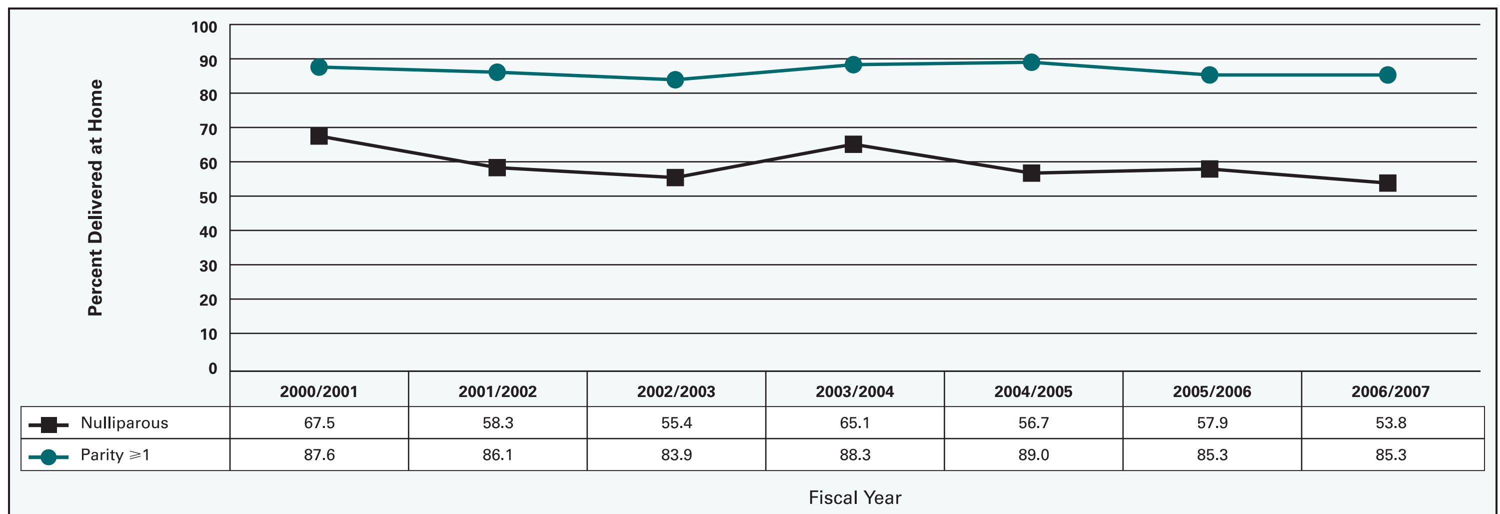
	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
Nullip Home	27.7	27.6	31.2	23.6	27.8	23.4	20.5
Parity ⩾1 Home	37.5	35.0	36.1	29.6	31.9	30.1	29.4
Nullip Hospital	72.3	72.4	68.8	76.4	72.2	76.6	79.5
Parity ⩾1 Hospital	62.5	65.0	63.9	70.4	68.1	69.9	70.6

Source: BC Perinatal Database Registry

Moreover, of the women who plan to deliver at home, women with parity ⩾1 are more likely than nulliparous women to deliver at home (Figure 5). Women under the care of a registered midwife who do not deliver at home, deliver at hospital.

Figure 5

Intended at home, delivered at home, by parity, 2000/2001 to 2006/2007



	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
Nulliparous	67.5	58.3	55.4	65.1	56.7	57.9	53.8
Parity ⩾1	87.6	86.1	83.9	88.3	89.0	85.3	85.3

Source: BC Perinatal Database Registry

Discussion

This analysis shows that the rate of deliveries in British Columbia under the care of a registered midwife has increased by 58.8% between 2000/2001 and 2006/2007. Deliveries with midwifery involvement are of two types: deliveries at home under the care of a BC registered midwife and deliveries at hospital under the care of a BC registered midwife. An informed decision is made by the woman as to the planned place of delivery, with the majority choosing to deliver at hospital rather than at home. In 2006/2007, 75.1% of women under the care of a registered midwife planned to deliver at hospital. Both nulliparous women and women with parity ⩾1 are more likely to plan to deliver at hospital, but women with parity ⩾1 are more likely than nulliparous women to plan to deliver at home.

Of the hospital deliveries, the care provider delivering the baby can be a family physician, obstetrician, surgeon, registered midwife or registered nurse. The majority of the hospital deliveries with midwifery involvement are by a registered midwife (62.2% in 2006/2007).

Of the planned home deliveries, 53.8% of nulliparous women and 85.3% of women with parity ⩾1 actually delivered at home in 2006/2007.

This increasing trend of deliveries in BC with midwifery involvement suggests that more and more women are choosing to deliver under the care of a registered midwife.

Conclusion

Rates of women in British Columbia choosing to deliver babies under the care of a registered midwife are increasing. This implies that women are increasingly choosing the holistic model of pregnancy and delivery through midwifery care. In BC, all midwives are required by law to register through the College of Midwives of British Columbia. They are also members of the Midwives Association of British Columbia. Midwifery is based on the natural processes of pregnancy, labour and delivery with safety measures in place to ensure the best outcomes for the mother and her newborn [8].

Many women in BC, while preferring to deliver under the care of a registered midwife, choose to deliver at hospital rather than at home. The reason for this preference is unclear from this analysis. There has been an increase in deliveries by registered midwives both at home and at hospital, although the deliveries at home have increased at a slower rate than the deliveries at hospital.

With the increased demand placed on the healthcare system (increased resources for labour and delivery [9] and shortage of maternal care providers [10]), care of low-risk pregnancies by registered midwives may help to alleviate some of pressures experienced by healthcare providers as well as women and their families [11].

This report has focused on presenting a general summary of deliveries in BC under the care of registered midwives. A more extensive analysis of the clinical outcomes and surgical interventions such as type of delivery, use of epidurals, episiotomies and other interventions in midwifery will be detailed in subsequent reports. These reports as well as other research analyses in BC will be helpful in attaining a comprehensive understanding of deliveries by registered midwives in the province of British Columbia [11].

Appendix

Glossary

Actual place of delivery – place where the pregnant woman actually delivered her baby (e.g. home, hospital).

Care provider – person who provides the actual, hands-on care for the delivery of the baby. The health care provider who physically delivers the baby.

Intended place of delivery – place where the pregnant woman plans to deliver her baby (e.g. home, hospital).

Nulliparous – a woman who has never delivered a baby (500 grams weight or 20 weeks gestation) in a previous pregnancy.

Parity ⩾1 – having carried a previous pregnancy to a point of viability (500 grams birth weight or 20 weeks gestation) regardless of outcome.

Registered midwife – midwifery is a legal and regulated profession in British Columbia under the Health Professions Act (RSBC 1996) Chapter 183 and the Midwives Regulation BC Reg 256/2005. All midwives must be registered with the College of Midwives of British Columbia in order to practice their profession.

References

1. Canadian Midwifery Regulators Consortium (CMRC), [online], cited April 18, 2008 from http://cmrc-ccosf.ca/node/19
2. College of Midwives of British Columbia. Vancouver, British Columbia: Canada, [online], cited April 2, 2008, from http://www.cmbc.bc.ca/.
3. Hawkins M and Knox S. ***Midwifery care continues to face challenges: Canadian midwifery is still defining itself, one mother at a time.*** The Canadian Women's Health Network. 2003(6).
4. Zelmer J and Leeb K. ***CIHI Survey: Challenges for providing maternity services: The impact of changing birthing practices.*** Healthcare Quarterly. 2004: 21-23.
5. British Columbia Perinatal Health Program. ***British Columbia Perinatal Database Registry Annual Report 2007.*** Vancouver, BC.
6. Canadian Institute for Health Information (2004). ***Giving Birth in Canada: Providers of Maternity and Infant Care.*** Ottawa: CIHI.
7. British Columbia Perinatal Health Program. ***British Columbia Perinatal Database Registry:*** Vancouver: Canada.
8. Canadian Association of Midwives, [online], cited April 17, 2008 from http://www.canadianmidwives.org/reports_studies.htm
9. Canadian Institute for Health Information (2006). ***The Costs.*** Ottawa: CIHI.
10. Evidence Boost. ***Allow Midwives to participate as full members of the healthcare team.*** Canadian Health Services Research Foundation. June 2006. Ottawa, Ontario.
11. Janssen PA, Ryan EM, Etches DJ, Klein MC, Reime Birgit. ***Outcomes of planned hospital birth attended by midwives compared with physicians in British Columbia.*** Birth 2007;34(2):140-7.

Publication Information

Published by the British Columbia Perinatal Health Program (BCPHP)

Suggested citation: British Columbia Perinatal Health Program. Midwifery in British Columbia. Vancouver, BC. June 2008

British Columbia Perinatal Health Program
F502-4500 Oak Street
Vancouver, BC V6H 3N1
Telephone: 604-875-3737
Fax: 604-875-3747
http://www.bcphp.ca

Graphic Production by Angela G. Atkins