Human Resources and the Environment of Birth in Canada: On the Brink of a 'New Normal'

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Published by Women and Health Care Reform

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Également disponible en français. [if relevant]

ISBN ####

The **Women and Health Care Reform Group** is part of the Women's Health Contribution Program of Health Canada. The Group coordinates research and policy advice on the effects of health care reforms on women. This publication has been made possible through a financial contribution from Health Canada. The views expressed herein do not necessarily represent the views of Health Canada.

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Women and Health Care Reform

Formerly the National Coordinating Group on Women and Health Care Reform

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Introduction

The term 'environment' tends to elicit images of macro-level issues and spaces, usually involving natural resources and the outdoors. Yet more micro-level, interior environments are themselves worthy of consideration, as they too can have far-reaching consequences on quality of life and maternal health. The case in point here is the environment of birth. Where birth takes place, who is in attendance and how care is provided all play a role in shaping the experience of birth and its outcomes. As with other kinds of environments, the sustainability of a positive and genuinely healthy environment for birth is important. It is also very much in question in Canada, as women and their families adapt to scarcity and changes in the distribution and organization of primary maternity care providers across the country.

Where birth takes place, who is in attendance and how care is provided all play a role in shaping the experience of birth and its outcomes.

Historically in Canada, a normal birth meant one that proceeded according to a woman's body's timing, relatively free of interventions and complications, in a nearby hospital or even at home, attended by a midwife or family doctor. Today, such births are rapidly disappearing. Most births are now highly medicalized events, attended by obstetricians in urban, tertiary hospitals. We are on the verge of a 'new normal' for maternity care in Canada, one that is being driven in large part by health human resource shortages and cultural trends rather than by deliberate design.

Much has been written, in Canada and elsewhere, about the current shortages of maternity care professionals and the disparities in the availability of maternity care across this country, as well as about the factors that help or hinder good outcomes in maternity care.[(1)] Yet despite broad agreement across provinces, panels and commissioned studies as to what is required, the rhetoric about a crisis in maternity care has not been followed up with action. Meanwhile, women-centred care is becoming increasingly rare.

We are on the verge of a 'new normal' for maternity care in Canada, one that is being driven in large part by health human resource shortages, changes in skill sets and cultural and social trends in the provision of care, rather than by deliberate design.

It is in this context that we turn our attention to the environment of birth. Where are women giving birth? Who is in attendance, and what kinds of care are they trained and equipped to provide? Who is not there? This report will offer reasons for the dissonance between evidence and practice and propose ways forward that are relevant to policy makers, health practitioners, researchers and most importantly to

birthing women. The time is right to articulate a renewed vision of normal birth in this country, in which the organization of maternity care is shaped primarily by what evidence tells us promotes and facilitates healthy outcomes, by women's needs and by the physiology of the event itself.

Warning Signs

By international standards, Canada ranks among the best in the world in terms of maternal and child health. It has the infrastructure and expertise to deal with health catastrophes and a health system that has been internationally recognized for its excellence. It is therefore in the enviable position of being able to explore whether the system is actually providing supportive experiences for women while maintaining positive clinical outcomes.

Recognizing Canada's strength in the global context, it is still worth paying attention to the fact that some trends are alarming.[a] OECD data from 1990 to 2002, released in 2006, show Canada slipping from 6th to 21st in terms of infant mortality, 12th to 14th in perinatal mortality and 2nd to 11th in maternal mortality. Canada also has one of the highest rates of preterm births in the OECD. (2) Increasing maternal age (from 1976 to 2002, the proportion of mothers who were over 30 at the time of their first birth rose from 9% to 34% [b]),(3) increases in multiple births and newborn intensive care visits, maternity care provider shortages and regional disparities in the provision of care are all causes for concern.

Historically and internationally, maternal and child health indicators have improved dramatically alongside improved nutrition, contraception, and better access to medical services.[c] It seems that in contemporary Canada, increased medicalization of birth is having the opposite effect. Given good care, the vast majority of women can labour and give birth without intervention, yet medical intervention rates, including cesarean sections, vacuum extraction and the use of analgesics and narcotics are rising, often without evaluations, policy reviews or demonstrable improvements in outcomes. (4,5) For instance:

- In 2005, Canada's C-section rate was 26% -- well in excess of the 10% to 15% recommended by the World Health Organization and markedly higher than the 1969 rate of 5.2%. (6)

- In British Columbia, from 1998 to 2004, the C-section rate jumped 50%, to approximately one in three. (6,7)

- Close to two-thirds of labouring women in urban centres have an epidural. (8)

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[a] These trends are complex and interrelated. See for example Health Canada, Changing Fertility Patterns: Trends and Implications. Health Policy Research Bulletin*;* May 2005 for further details.

[b] Increasing maternal age can increase the risk for some reproductive complications and child health issues. It can also yield benefits in terms of educational levels and economic and relational stability.

[c] Improvements in other determinants of health are also critical, as is the increase in the presence of trained birth attendants.

- Inductions have risen dramatically to about 19%.[d(6)]

Evidence-based obstetrics has helped to limit several unnecessary and invasive procedures, such as enemas, "twilight sleep", unnecessary episiotomies and elective use of forceps.[(9,10)] Similarly, other interventions in normal labour such as those listed above must be justified by good evidence of their effectiveness. But Canada's high intervention rates cannot be attributed only to a failure to pay close attention to the clinical evidence. Poor health human resource planning may be as much to blame.

A Supportive Environment for Birth: What We Know

There is considerable diversity among industrialized countries as to how maternity care systems are organized.[(11)] Because the organization of health care is socially constructed and therefore changeable, Canada could be in a position to renegotiate a maternity care system that creates an environment that best supports the physiological process of birth.

In past decades, the women's movement called for "women-centred care," with the hope that this would ensure the development of systems to support women through pregnancy, labour and birth. Today the situation is more complex. Women often live out their pregnancies without confidence in their ability to labour and give birth. They can be misinformed about the risks of interventions. The concept of "choice" no longer applies if there are no facilities, care providers or role models available to guide women through a physiologic birth process. We have a greater appreciation that women are not a homogeneous constituency with shared needs and perspectives on the ideal birth. Clearly different women want very different things. But these wants do not emerge in a vacuum. A continuing commitment to women-centred care should at least point to the need to listen carefully to whatever it is that women want, pay attention to how those desires have been socially shaped, and to provide care accordingly. Although the details of how women's needs are communicated and met will vary, there is substantial consistency at the root of their concerns: they want to have a healthy baby, to know the people who are helping them bring that baby into the world, to be able to cope with the pain of childbirth, and to feel positive about their experience.[e]

Research is emerging in Canada that indicates that midwifery clients are consistently more satisfied than mothers cared for by other health professionals, with other outcomes staying comparable.[(12-14)] Patients of caring physicians who are intimately involved with their patients and who support birth as a natural process also report high satisfaction and better-than-average outcomes. [(15)] Their experience should therefore be instructive in pointing the way toward an environment of birth that supports women most successfully. What do satisfied clients identify as contributing to a positive care

[d] Inductions are a contributing factor to higher C-section rates.

[e] See for example National Childbirth Trust/Royal College of Midwives/Royal College of Obstetricians and Gyneaecologists. Making normal birth a reality: Consensus statement from the Maternity Care Working Party. United Kingdom, 2007.

experience? What supports physiological birth? In addition to wanting clinical competence,[14] mothers affirm the need for the following:

Characteristics of a woman-centred maternity care system:

- *Relational care*
- *Informed care*
- *Local care*
- *One-to-one support*
- *Empowering care*
- *Fewer interventions*
- *Effective referral system*

- *Relational care*

  Women want to have a relationship with the person or people providing their care. They appreciate their caregiver taking the time to listen to them and get to know them. There is some evidence that care providers do not tend to place as high a premium on relational care as do the recipients of that care, and that women's accounts of their birth experiences tend to emphasize the relational dimensions as much or more than the technical or clinical aspects. [16]

- *Informed care*

  Relationships take time to develop; investing that time also contributes to women being fully informed about the care being offered to them. They seek care that allows them to ask questions, discuss the full range of options and make meaningful choices in a non-judgemental context.[14,16] Longer appointments that do not feel rushed are therefore very helpful.

- *Local care*

  Not only is staying local more convenient and less costly for birthing women and their families, but health outcomes are demonstrably better for women and their babies when mothers do not have to leave their community to give birth.[17,18] What 'staying local' means varies widely, from being able to give birth in a small town hospital rather than travelling an hour to the closest city, to being able to stay in a northern community to give birth at the local birthing centre rather than being flown south well in advance of the birth 'just in case'.

- *One-to-One support*

  Labour is shorter and intervention rates such as vacuum extraction, forceps, anesthetic and C-sections are lower when women receive one-to-one continuous labour support. Such support is therefore cost effective. It also raises satisfaction without compromising safety. [4,6,8]

- *Empowering care*

  Women report feeling more connected to and positive about their body, their birth and their baby when they are in the care of midwives or others who are fully supportive of them. Natural childbirth can be enormously empowering;

consider the fact that obstetricians from several countries who themselves have experienced vaginal birth report that they would not choose to deliver by C-section for their own subsequent births, despite conducting C-sections for others every day. [19] Empowerment is an outcome often overlooked by current quality measurement systems. [9]

- *Fewer interventions*

  Lower medical intervention rates are often a by-product of these other qualities of care. They usually result in shorter recovery time and a lower likelihood of complications in subsequent births. Women with fewer interventions are more likely to report being very satisfied with their birth experience.[14] Less intervention also reflects a philosophical difference in how birth is understood and managed, which many women report is empowering to them.

  Interestingly, it is not only birthing women who are supportive of less medical management of birth. Low intervention births are far more cost effective and therefore attractive to hospital administrators, and obstetric nurses report that attempts to hasten, mechanize or control birth hamper their ability to provide good intrapartum care, whereas teamwork and a philosophy of birth as a natural process enhance their ability to provide high quality care. [20] There are therefore clear opportunities to identify points of synergy where the interests of clients coincide with those of care providers and policy makers.

- *An Effective Referral System*

  Women and caregivers alike want to know that, in the event of complications, there is an integrated, collaborative network of support that will allow them to access the help they need. This includes, for example, ready access to ambulance services, anesthetists, obstetricians and neonatal care services within a supportive team. For caregivers it also includes having access to colleagues who can provide back up so that their on-call schedule is manageable.

It is proposed that these seven characteristics guide the development of a women-centred maternity care system. Before exploring how that might happen, we will turn our attention to the current environment of birth in Canada, with particular emphasis on the people who are providing maternity care and the extent to which they are equipped to provide this kind of care.

The Current Canadian Environment for Birth: Human Resource Challenges

a) Supply and Demand

A central reason why Canada may be on the brink of reshaping its vision of maternity care, and in fact is being required to do so, is that the mix of care providers attending

births in this country is dramatically shifting. Women can no longer assume that their family doctor will deliver their baby in their local hospital. Family doctors are getting out of providing obstetric care at an alarming rate; a recent national study indicated that just 16.5% of women had a family physician as their primary birth attendant.[14] In Ontario in 2003, only 15% of women having babies were attended by a primary care provider during birth.[21] Midwifery is no longer an isolated pilot project, but is becoming part of the mainstream in more provinces and territories. Obstetricians, trained to be specialists, are increasingly attending normal births, even as a growing percentage are avoiding intrapartum care altogether. Few nurses specialize in maternity care and a shortage of qualified nurses is directly affecting maternity service provision in many communities. The core questions, therefore, are will there be enough care providers to attend births, and will they have the right skills to do so?

> *16.5% of women in Canada have a family doctor as their primary birth attendant.*

For many women, health care availability is changing so rapidly that each pregnancy requires new research to determine who is available to provide care where. This is especiallly true for women living in rural or remote locations, as well as for other marginalized women who may require or desire care outside of the mainstream. The risk is that decisions such as where to give birth, whether to use anesthetic, whether to have a C-section and even when to give birth may increasingly be made based on the availability of care rather than on clinical indications or women's choices. [5,16,18]

Unlike in other sectors, there have been few contingency plans in place to address labour shortages in health care. Yet decision makers are starting to take notice of the problem. Addressing shortages in health human resources is a priority identified in the First Ministers' Accord of 2003. It is the number one strategic priority of the Canadian Association of Midwives and is high on the agenda of the Society of Obstetricians and Gynecologists of Canada. The Health Council of Canada has referred to health human resources as the most pressing challenge facing our health care system.

Problems with matching the demand for maternity care providers with their supply, including recruitment, retention, distribution, organization and responsiveness, make it very difficult for Canada's maternity care system to begin to reflect the care priorities satisfied mothers have articulated. What follows is a more detailed overview of those currently providing care to birthing women in Canada.

b) A Snapshot of those "Still in the Game"

Family physicians

There is an overall shortage of family doctors in Canada, with rural, remote and northern communities being at a particular disadvantage. Although more women are entering the medical profession and providing obstetric care, they tend to be practicing part-time, thereby not filling the gap as quickly as full-time practitioners would.[8]

Where family doctors are available, they are leaving obstetrics in droves. From 1996/7 to 2002/3, the percentage of births attended by family practitioners fell from 37% to 28%, and that number continues to fall. [3,14] In 2002, 45% of those doctors still delivering babies reported expecting to get out of doing so within the next five years.[21] Only 13% of family doctors provide actual intrapartum care, with the proportion being higher in rural areas than urban, and just fewer than 50% provide pre- and postnatal care.[3]

Those getting out of providing obstetric care cite factors such as interference with lifestyle, remuneration concerns, burnout due to limited back up, and fear of litigation as their primary reasons for doing so.[8] They also tend to be practitioners who are less positive about non-traditional maternity care providers and models.[22] The declining birth rate and rural depopulation have led some physicians to report a loss of confidence in their obstetric skills.[8,23] For new practitioners, it appears that the decision not to practice obstetrics is made during residency and is in part a reflection of the nature of the training they receive.[8, 24] Yet those who are still delivering babies are attending more births each and achieve significant job satisfaction from doing so.[21, 25] Overall, the provision of maternity care is no longer considered an essential service within family medicine, but is provided at doctors' discretion. Within this context, most doctors are opting out.

Obstetricians

Obstetricians are specialists who are surgeons trained to handle complications. There remains confusion about their role as primary maternity care providers, as increasingly they are stepping into the breach left as family doctors no longer provide the service. In 2002/3, for example, obstetricians delivered over 70% of babies in Manitoba. [26] In 2005, 84% of women having babies in Ontario were in the care of an obstetrician. [21] Nationally in 2008, that figure stands at roughly 55% for prenatal care and 67% for intrapartum care.; [14] despite only ten percent of births being deemed high risk. In many teaching hospitals, obstetric residents are the ones attending most births, with varying degrees of direct supervision and little or no prior relationship with the woman and her family. As with family doctors, just over one third of obstetricians are female.

The proportion of births obstetricians are attending is increasing, but there are not enough of them available to compensate for the rapid decline in the supply of family doctors. A shortage of obstetricians in Canada has long been predicted. It is an aging specialty, which has been identified in Ontario as being eligible for accelerated expansion, but recently there have not been enough interested candidates to fill available residency places. [4,5,8] In fact, even practicing OB/GYNs are getting out of doing obstetrics; 17% do not provide obstetric services at all, and the number of obstetricians attending births is declining by 9% per year. [8]

Midwives

Midwives are experts in normal childbirth. When compared with other maternity care providers, midwives' rates of intervention in birth are lower and the satisfaction of their

clients is higher, despite showing similar outcomes.[7] Having been at the core of birthing in Canada in previous generations, licensed midwives are new to the contemporary maternity care landscape. Their presence is shifting the balance of power away from an exclusively medical understanding of the birthing process.

Funding, licensing, scopes of practice and education for midwives vary across the country, as well as between Aboriginal and non-Aboriginal midwives in some provinces. Midwifery is regulated and fully funded in British Columbia, Manitoba, the Northwest Territories, Nova Scotia, Ontario and Quebec; licensed but not publicly funded in Alberta; and not yet licensed in the remaining provinces and territories. Currently midwives attend roughly five percent of all births in Canada, slightly higher in Ontario where midwifery has been licensed the longest.[14,28]

Canada is in the midst of an historic shift, where midwives are poised to become a major player in the provision of maternity care. Having been very busy pushing for regulatory and academic legitimacy, midwives in many provinces are now focusing on human resource planning and on their growth as a profession. Vacant occupational space left by doctors, and a desire to cut costs, have converged with consumer pressure and a national commitment to accessibility to move midwifery forward relatively quickly in recent years. [11] Midwifery clients are no longer a 'fringe population' of well-educated women interested in exploring alternative birthing; in some contexts, they are women's first point of contact for maternity care because no one else is available to provide it. Midwifery is therefore entering the Canadian mainstream, and as one midwife has asserted, "If the [funding] lid were taken off, midwifery would explode exponentially." [29] Yet with their numbers still low, midwives are not in a position to ease the human resource shortage in the short to medium term. For example, in Manitoba, roughly 35 midwives are practicing and there are currently enough requests to employ 200 more. Yet midwifery training programs in that province are not operating at full capacity because there are simply not enough existing midwives to train new students. [30] Where midwives are in practice, they have long waiting lists and cannot meet the requests for care.

Obstetric Nurses

Although the maternity care literature in Canada is quite robust, less has been written regarding maternity nurses than about other maternity care providers. Yet nurses attend virtually all births and must therefore be central to maternity care human resource planning. Just five percent of nurses, or just under 14,000 people in Canada, identify maternity care as their primary area of responsibility, and that number has remained stable for more than ten years.[8] They work primarily in hospitals, providing support and monitoring the progress of labour for physicians. There is a shortage of experienced maternity nurses, particularly in non-urban areas. Training in primary maternity care is becoming more limited for graduating nurses.[5] Those who do specialize in maternity care consistently identify the importance of collaboration, particularly with physicians, in allowing them to practice effectively. [30]

Nurses working in extended roles, such as Advanced Practice Nurses and nurse practitioners, are also providing pre and post natal care. They may be able to fill some of the obstetric gap left by family doctors. [8] Yet as with midwives, funding and legislation surrounding nurse practitioners varies across the country and their developing role has yet to be fully explored. Their experience functioning under collaborative models of practice would be an asset as new models of primary maternity care provision are piloted.

Other Maternity Caregivers

An effective maternity care system needs to focus on more than the birth event itself. Care provided to a woman and her family prior to and following the birth is also critical to keeping them healthy. Despite considerable attention being paid to physicians, many other care providers play pivotal roles in shaping a woman's experience of the birthing year, including lactation consultants, prenatal educators, doulas and mental health workers. In the midst of health care reforms that have focused on the centralization and rationalization of services, these support services have become increasingly fragmented and under-resourced at a time when they are perhaps more needed than ever. [5] Public health nurses are a particularly important component of the maternity care team, providing postpartum follow up care in diverse communities and in women's homes. Within one week of birth, 93.3% of women report being contacted in their home by a health professional, [14] frequently a public health nurse. Again, funding and practice patterns for public health nurses vary widely across Canada.

Other specialist physicians such as anesthesiologists and pediatricians are key players in a comprehensive maternity care team. Often they too are in short supply and their presence or absence can also play a decisive role in women's birthing experience.

c) Competencies of providers

The environment of birth is shaped not only by who is in attendance, but how they are equipped to practice. Conversely, policy decisions related to the health human resource environment in turn have shaped how caregivers are trained to provide care. For example, as births become more highly medicalized, opportunities for training in how to support a woman through a normal, low-risk birth decline. If physicians and nurses have not directly experienced many low-intervention births, they are less likely to have confidence in the physiological process of birth. Similarly, as more and more births occur in tertiary hospitals, caregivers have limited exposure to, and therefore less confidence in, community and rural hospitals, low intervention hospital care and/or community-based care in birth centres or at home. This despite the evidence that outcomes for C-sections, for example, unlike many other procedures, are comparable between low and high volume centres. [8] As birth rates decline, fewer physicians provide maternity care and maternity units close, obstetric skills are being lost that could otherwise be used to attend births and/or to train others to do so. Moreover, opportunities to 'cross train' with other maternity care professionals are limited, often resulting in a lack of familiarity with others' scopes of practice and core competencies. For instance, physicians who

report being most favourably inclined toward midwifery care are those who have had the most direct exposure to midwives.[32] To cite a final example, the content of caregivers' training may not match what most women most need most of the time. For instance, as surgeons primarily trained to look for complications, obstetricians are not likely to consider sitting quietly with a birthing woman to be a core competency, as it is for midwives. Since specialist physicians attend a high proportion of normal births in Canada, women are rarely receiving continuous, less invasive labour support.

d) Division of Labour

One-on-one labour support is clearly beneficial to women, yet one may rightly ask whether its provision is in fact the best use of an obstetrician's time. This example points to the need for a division of maternity care labour that optimizes each caregiver's skills while keeping women's needs at the centre and avoiding duplication. Currently, women's birthing experiences in Canada are driven far more often by who is available than by who is best suited to provide the care that is required. Coordination of scopes of practice is necessary, alongside sufficient supply, to ensure that professionals can work according to their areas of greatest strength. Professional maturity and an appreciation of strengths and weakness are crucial. [33] Practitioners also need experience working in truly collaborative environments rather than in parallel with one another. [5,8,34] As C. Davies has suggested, "it is not what people have in common but their differences that make collaborative work more powerful than working separately." [35] At the root of this optimal division of labour lies a need for a remuneration system that better aligns economic incentives with optimal practice.

e) Professional and Regulatory Context

The human resource environment for birth is also affected by the professional and regulatory context in which health professionals are working. Medical dominance has been a key historical feature of the Canadian health care system; and the political power of physicians, within hospitals, regulatory bodies and elsewhere, continues to be considerable, particularly in comparison with nursing and midwives. Health professionals are too often placed in competition with one another for resources and policy attention, and as a result may be less inclined toward collaboration and respect for others' skill sets. Some health professions are considerably better organized than others. In the end, battles over professional territory, in a context of an uneven playing field, can take precedence over women's interests in the organization of care.

Related to the power dynamics that underlie professional associations are those that shape hospital protocols. Hospital management committees have considerable influence in shaping the practice patterns of various maternity care providers. For instance, the number of midwife-attended births might be capped in a given hospital based on a decision by the medical advisory committee, regardless of the actual demand for midwifery services in the community. Or midwives might be required to transfer care to an obstetrician under conditions when a consultation without transfer might be expected in another institution.

Canada's political jurisdictions further complicate the picture. With health being a provincial responsibility, consistency across provinces and territories in terms of licensing, funding, standards of care and education etc. is very difficult to achieve. Standardization and coordination is even challenging at more local levels, where maternity services can shift or close with very little regional or provincial input.

Moreover, coordinating national-level leadership for maternity care has proven to be problematic. Funding for national women's organizations has been dramatically cut and there is currently no mechanism by which the voices of Canadian women can be clearly heard on the issue of women-centred maternity care. Pan-Canadian initiatives such as the *Multidisciplinary Collaborative Primary Maternity Care Project* (called MCP^2), designed to address the maternity care human resource shortage in Canada by facilitating collaborative practice, have suffered from a lack of coherent follow-up, leadership and accountability.[1] Yet no single jurisdiction or profession can make the needed changes in isolation.

f) Working Conditions

The policy context that shapes the working conditions of maternity care providers is yet another dimension of the environment of birth. Complex funding decisions are at the core of this issue; shortages of health professionals are in part the result of inadequate public funding. Four specific dimensions: referral networks, peer support, compensation and closures will be highlighted here.

Health care practitioners require satisfactory back-up in order to practice safely and sustainably. This means, for instance, that midwives and physicians require adequate nursing support, reliable ambulance services, timely access to specialist services such as anesthetists and pediatricians, and availability of tertiary care when needed. This combination of supports is increasingly rare, particularly in rural and remote locations. Without such networks, health care providers are severely hampered in their ability to offer good care and as a result, women and their families have limited options and are often required to travel farther to obtain the care they require.

Those same practitioners need colleagues with whom they can share the burden of needing to be on-call 24/7 for births. They also benefit from having others with whom they can learn, share ideas and gain collegial support. In a context of shrinking health human resource availability, this kind of support is eroding, particularly in remote locations.

Physicians who are no longer delivering babies report inadequate remuneration as one factor contributing to that decision.[3,5] It is essential that health professionals be paid adequately; with so many reasons for them to avoid being involved in obstetrics, sufficient compensation is a relatively easy one for governments to address.

Yet compensation concerns encompass not only the amount health care providers are paid, but also how they are paid and how those compensation systems shape the way they practice. For instance, it is widely understood that salaried health professionals can

afford to spend more time with their patients than can physicians who are paid on a fee-for-service basis and therefore have little incentive for doing so. Women report being more highly satisfied with their care when it is provided by someone who takes sufficient time with them. [16,33] If, therefore, women's interests are to be placed at the centre of a redesigned maternity care system, then such a system should ensure that the model of compensation does not work at cross purposes with the kind of care envisioned.

Another way to compensate caregivers is to ensure that they are working hours proportional to their pay. There are examples of creative ways to keep workloads reasonable. In the Netherlands, for instance, the government provides postnatal assistants to primary maternity care providers in order to keep their workload manageable. [11]

A final example of the way health policy decisions affect working conditions, which in turn affect care quality, is that of hospital closures. Across the country, small hospitals are being closed as care is centralized into larger tertiary centres. Even where the hospitals themselves might stay open, maternity services are frequently being dropped. In British Columbia alone, at least fourteen maternity care services have closed since 2000 due to fiscal constraints, healthcare reform and a shortage of maternity care providers.[36] It has been argued that maintaining a viable, local maternity service is central to the sustainability of small communities; without it, communities experience a downward spiral in which various services, many not directly related to health care at all, suffer or disappear. [37] Moreover, as women need to travel farther from home to access services, costs to them and to the system increase and outcomes decline. [16] Hospitals are also important employers; their closure directly affects the livelihoods of those who work there and the surrounding community.

Perhaps even more difficult for women and their caregivers is the 'time in between', when services are dwindling but have not yet disappeared altogether. During that time, women can be left wondering whether there will be sufficient staff to allow them to give birth locally or not, just as health care workers are wondering if they will have the back-up support they need. Some rural women in Canada have reported that this uncertainty is even more stressful than knowing for sure that they would have to leave their communities to give birth. [16]

g) Place of Birth

Another important dimension of the environment of birth is a spatial one: where does birth actually occur in Canada? In the vast majority of cases, even for midwifery clients, the answer is in a hospital. Births account for roughly 24% of all acute hospital stays. [8] Births occur in primary, secondary and tertiary facilities, attended by midwives, family doctors and obstetricians along with the nurses who support their care. Most births happen in large community or teaching hospitals. Small and medium-sized institutions are under considerable pressure, as a result of quality assurance requirements and financial expectations, to get out of providing maternity care, resulting in significant costs being borne by women and their families, especially in rural, remote and northern communities, who find themselves having to travel long distances to give birth. [5]

Birth centres, either free-standing or attached to hospitals, offer an alternative to hospital-based care. Usually staffed by a combination of nurses, midwives, family doctors and consulting obstetricians, these centres offer a community-based, family-centred environment for birth. There are relatively few birth centres in Canada – publicly funded centres are currently providing services in Quebec, Nunavut and on the Six Nations reserve in Ontario and there is one privately funded birth centre in Alberta – but they are more common in the UK and US. Less than one percent of births in Canada occur in birth centres; fewer than at home.[14] Women and care providers report being highly satisfied with birth centre care, and demand for birth centre services swiftly and consistently outstrips their supply. Preliminary research data suggest that they are both safe and cost effective, and they have the added benefits of providing care to women in their own communities and serving as additional training sites for health care workers.[4]

In some provinces and territories, women can also be attended by regulated midwives as they give birth at home. Approximately one percent of births occur at home.[14] In Ontario in 2006/7, homebirths comprised roughly 20% of all midwifery-attended births.[38] That proportion is declining as an increasing percentage of midwifery clients give birth in hospital. [21] Planned home birth for low risk women when attended by certified midwives is associated with lower intervention rates and similar outcomes to hospital births. [39]

Place of birth is not only important insofar as it shapes the immediate environment of birth; it also frames a critical policy question. The number of birthing sites envisioned in a given region or province has direct and far-reaching staffing implications. If, for instance, health planners decide that all births should occur in three or four large tertiary hospitals, maternity care teams will be developed quite differently than if the goal is to staff numerous small birthing centres in communities throughout the area. Insofar as women-centred care is characterized by birth closer to home, the latter scenario is preferable, albeit more difficult to staff.

Tensions and Contradictions

Even based on this preliminary overview of the current human resource situation in maternity care, fundamental inequities and tensions become apparent. Consider the following:

- "No more Sunday babies" – if current trends continue, fewer and fewer babies will be born on the weekends in order to accommodate physician shortages and schedules; a poignant indicator of the forces driving the current system, and of the extent to which physiologic birth is in jeopardy.

- Dialogue among women – as more male physicians retire and an increasing proportion of graduating physicians are female, the gender balance of medicine is shifting. Negotiations between physicians, midwives, nurses and birthing women that could once have been characterized as exemplifying patriarchy are

now conversations among women. Further research is needed to explore whether or not the underlying dynamic of those negotiations has substantially changed; the power of being socialized into a medical model may supersede the power of gender itself.

- Women-centred care for which women? As the supply and distribution of maternity care providers narrows, birthing women require increasing wherewithal to seek out the kind of care they desire. Consider therefore the requirements on women who struggle to participate fully in mainstream culture, perhaps for reasons of language, economic standing, education or ethnicity. The current organization of care does not affect all women equally. In a context of scarcity and change, marginalized women are likely to be further marginalized.

- Who wins? As in other feminist analyses, the question of who benefits and who loses from the status quo is central. Answering that question satisfactorily is very complex. Currently, obstetricians involved in high-volume practices are attending a high percentage of uncomplicated births, and are paid per delivery for doing so. Many family physicians are finding obstetrics difficult to sustain and are able to opt out of providing that service within their practice. Obstetric nurses have indicated that procedure intensive births make caring for patients more difficult. Hospital administrators are juggling complicated on-call schedules in a context of few providers and budget cuts. Midwives are establishing themselves professionally and training students even as they maintain their own practices. And women are having to drive farther in order to give birth, often attended by someone they have never met. Everyone is stretched beyond reasonable capacity. Even as power dynamics shift, medical dominance and economic imperatives continue to drive the system, often at the expense of women-centred care.

In Summary

Having reviewed the human resource environment for birth in Canada, what can we say with certainty?

- With increased reliance on technology and decreased accessibility of low risk primary maternity care sites and providers, birth is being treated as an emergency rather than a normal life event.

- The evidence regarding what kind of care is desired and required is clear and consistent, yet we are paying it merely lip service. Women's priorities are not at the centre of maternity care planning.

- The expertise of the various players is not being used efficiently under the current mode of organizing the system.

- Canada's pool of maternity care providers and health care institutions is stretched to its limit.

- The *status quo* cannot continue

Reshaping the environment of birth to meet the needs of birthing women requires a change in thinking as much as a change in funding or protocols. We will therefore turn our attention to the reasons for the dissonance between what we know and how care is actually provided.

Why the Problem? Competing Interests and Varying Philosophies of Birth

When faced with human resource shortages, perhaps the most obvious 'solution' is increased funding for education, recruitment and retention. While needed, increased funding alone is not likely to address the tensions and inaction that continue to plague maternity care in Canada. Philosophical differences in the way birth is understood need to be made more explicit, because they are at the root of how any maternity care system is organized.

We know, for instance, that obstetricians tend to be the most attached to technology and interventions in birth, midwives the least, and family doctors are a more heterogeneous group falling somewhere in between.[(40)] The environment of birth is created by not only who is there, but how they approach the event. Recent US research has confirmed that there are numerous disconnects between the maternity care women want and the care they receive, including not being fully informed of potential complications and not being offered the full range of possible options. The authors trace this back to economic incentives, along with a desire, usually on the part of physicians, to control the timing of birth. [(41)] The root issue is not 'who is catching babies?' but rather 'whose interests are served by the way the system is organized?'

Consider, at the extreme, how these examples of competing interests might lead to different means of organizing the provision of care. To the extent that birth is framed primarily as a medical emergency, having access to advanced medical technology and personnel becomes of paramount importance. If attending births is understood primarily as a an issue of maximizing job satisfaction, then the convenience, working conditions and revenue of the caregivers become of the highest priority. When birth is seen as primarily being about serving the needs of a woman and her baby, very different decisions are taken that put her interests at the fore.

Ideally, a system could be developed that meets the needs of a variety of stakeholders equally. Such a system would be grounded in how women labour best by providing local, continuous care. It would serve the interests of physicians and other health care professionals by offering the lifestyle, support and remuneration required to be sustainable and by allowing each specialty to focus on doing what it does best. It would be affordable. Yet the reality is, as with virtually any policy decision, that these various interests are more often competing than complementary. And when faced with

competing interests, whose priorities win the day, and who decides? To put it another way, what will be our starting point for designing a maternity system in Canada that works – and for whom will it work?

The trade-offs inherent in designing the maternity care system need to be made explicit and therefore open to debate, rather than occurring behind closed doors or by default.

These questions should not lead to the conclusion that it is impossible for a maternity care system to serve multiple interests at once. It has to. The assertion here is that the trade-offs inherent in designing the system need to be made explicit and therefore open to debate, rather than occurring behind closed doors or by default. Moreover, we would suggest that the starting point be women themselves – that the physiology of the birthing process and the priorities for the birth experience that women articulate be the foundation upon which all other dimensions of the system are built. The need of the client population should be the starting point for policy and practice.

That may seem like a straightforward recommendation, but it is far from straightforward in its implementation, in part because the system has a long way to go to be truly women-centred. If the 'new normal' is medicalized birth scheduled based on the availability of care providers, we clearly have a long road ahead.

There are many other interrelated reasons why the Canadian maternity system has lost its focus on birthing women's needs. Nine will be treated here briefly in turn:

1. *A Culture of Fear*

Fear lies at the root of much of our current behaviour in relation to birth. Childbirth has become conceptualized, primarily by the medical establishment and the media, as an inherently risky event rather than a natural one. As a result, birth needs to be 'managed' rather than observed and attended; it requires obstetric care, focused on pathology and complications, rather than maternity care focused on health and support. In one US national study, only 45% of women surveyed agreed that birth is a natural process that should only be interfered with if medically necessary. [(42)]

Fear is cited as a major motivator behind women's requests for elective C-sections. They opt for a C-section out of fear of possible sexual dysfunction or rectal damage, despite the risk of those problems being far outweighed by the benefits to mother and baby of vaginal birth. Contrary to the evidence, C-sections are perceived to present little or no risk to women, while vaginal birth is increasingly seen as dangerous. [(33,43)]

Women's fear of childbirth does not arise in a vacuum; it is socially constructed. Physicians providing intrapartum care often act out of fear that something may go wrong, and their opinions carry enormous weight with their patients. If they see birth as a series of potential misadventures, their counsel to their patients cannot help but be affected. They may, for example, fail to present the full range of evidence about vaginal birth after a C-section or vaginal breech birth if they are nervous about offering them, resulting in patients who are not fully informed and whose choices are more limited than

they would otherwise be. This has been referred to as the 'coercion' of science-based obstetrics, which is very difficult for individual women to combat. [9,19] Consider the following language in a press release from the American College of Obstetricians and Gynecologists dated February 2008:

> *Despite the rosy picture painted by home birth advocates, a seemingly normal labor and delivery can quickly become life-threatening for both the mother and baby. Attempting a vaginal birth after cesarean at home is especially dangerous because if the uterus ruptures during labor, both the mother and baby face an emergency situation with potentially catastrophic consequences, including death… Choosing to deliver a baby at home…is to place the process of giving birth over the goal of having a healthy baby.* [44]

If birth is communicated as being a dangerous event to be feared, the way it is attended by practitioners and approached by birthing women will be qualitatively different than if it is considered primarily to be safe, normal and worthy of celebration. At the root of maternity policy decisions lies the question, 'Do we want to develop a fear-based system, or support people in facing their fears?'

2. Lack of Coordinated Leadership

Who speaks for birthing women? There is no clear mechanism or organization representing women's interests. When recommendations for creating a more sustainable maternity care system are put forward, to whom are they addressed? Redesigning the maternity care system with birthing women at its core requires unambiguous and coordinated leadership, with accompanying legitimacy, resources and accountability. It also requires significant time. As the MCP^2 process has demonstrated, follow-up on national maternity care initiatives is difficult to sustain.[1] And as one midwife explained, midwives have been fully occupied achieving legitimacy, licensing and education, not to mention catching babies.[29] Only now can they begin to turn their attention toward human resource planning. When coupled with longstanding interprofessional conflicts, unequal negotiating power and little support from professional associations for interdisciplinary work, alongside the lack of a pan-Canadian strategy, it is perhaps not surprising that progress in this area has been slow.[45]

3. Insufficient Resources

While additional funding alone is insufficient to address human resource shortages, it is a necessary condition for change. Providers and institutions are clearly stretched to their limit. A lack of person hours is therefore another factor contributing to this problem, and multiple strategies to free up human and financial resources are obviously required.

4. Faith in Technology

Western society is in the midst of what has been coined 'a love affair with modern science.' Neither physicians nor their patients are immune from a widespread cultural pull toward increased control and 'quick fixes'. [34] In this context, technological

approaches are often seen as desirable, even in the absence of evidence. Women's willingness to accept surgical and pharmacological interventions in birth has risen.[46] Within a policy and research system that tends to measure those things that are easiest to quantify, and a trend toward increasing predictability in many areas of life, it is not difficult to see how science itself has played a role in driving a highly medicalized maternity care system.

5. Media Influence

The way childbirth is represented in the media plays a significant role in shaping women's expectations of their birth experience. Celebrities getting pregnant well into their forties; C-sections on demand; televised, complicated urban hospital deliveries – these are the images that influence our understanding of what birth is. Far less often do we see positive images of birth in the absence of medical intervention, perhaps with a midwife at home. Nor do we see the reality for many Canadian women of having to drive significant distances to have their baby in a place they have rarely been, attended by someone they have never met. Nor are we shown the C-sections that happen on a Friday afternoon simply because no doctor or nurse is likely to be available on the weekend. Or the postpartum depression that is a common by-product of disempowering birth experiences and of the isolation many women experience as they face caring for their new baby alone. The media reflects our reality, but it also plays a role in shaping it. How different our maternity system might be if the television images were different too.

6. Lack of Information

Although maternity care in Canada has been reasonably well documented [1,47], there are still significant gaps in knowledge, both in terms of biomedical and social science research. Data collection systems are not standardized and at times do not collect the specific kinds of information required. For example, tracking the number of obstetricians/ gynecologists practicing in a given jurisdiction may not be sufficient to reveal how many of those are actually providing intrapartum care.[3] Building a sustainable, evidence-based system requires the capacity to collect and analyze multiple kinds of usable evidence all across the country.

7. Social Isolation

At first glance, social isolation might not appear to be directly related to Canada's health human resource crisis. Yet it is a contributing factor insofar as birthing women may not have wide and deep social networks upon which to draw during the birthing year. As a result, their familiarity with being supported by loved ones as a strategy for coping with labour and motherhood may be limited, and their fear is likely to be heightened. Moreover, a lack of informal social supports means that women's need for formal supports, such as public health nurses or doulas or lactation consultants might be more acute. In the absence of such services, women need to rely more heavily on institutionalized medical care.

8. Complexity of the Problem

The sheer complexity of this issue is another contributing factor to it not having been adequately solved. It requires coordination between many jurisdictions, professional groups, clients and layers of bureaucracy across a vast nation; --- a daunting task, which requires considerable determination. As Murray Enkin has argued, evidence-based obstetrics has treated many of the remaining challenges in maternity care as though they were merely complicated rather than truly complex – birth is a life event to be experienced, not a problem to be managed, making effective policy intervention particularly challenging. [48] In the face of many other competing priorities, few policy makers have the mandate, resources or energy to take this on.

9. Resistance to Change

A final, related reason why there is such dissonance between what we know is needed and what is actually happening is our human tendency to resist change. This resistance is particularly acute among those who stand to lose something from a reorganized system – in this case perhaps doctors who face needing to surrender their control over attending births, or policy makers who have to release resources from other areas in order to adequately fund this one. Clearly within the current system there are winners and losers. The redistribution of power can be threatening and act as a barrier to change.

This list of reasons should not lead to inaction, but rather to more strategic and targeted action. It is widely agreed that the status quo cannot continue, but responding to a crisis is less inspiring in the long term than crafting a shared and compelling vision for change. What might it look like if the 'new normal' for childbirth in Canada were a sustainable system that took birthing women's needs as its non-negotiable starting point? We now turn to an exploration of possible answers to that question.

Responding to a crisis is less inspiring in the long term than crafting a shared and compelling vision for change.

What should be done?

Canada is at a key historical moment to embrace the realignment of its maternity care system, for six key reasons:

1. Shortages and maldistribution of health human resources have meant that if current trends continue, women will be unable to find trained personnel to attend their births.

2. Primary maternity care is being provided by specialists.

3. Midwives are becoming legitimate players in the mainstream provision of maternity care.

4. Women are calling for a wider range of maternity care options, closer to home.

5. Governments are looking for cost effective models of health care provision.

6. A commitment to evidence-based medicine requires allowing the mounting evidence to shape the organization of care.

It is helpful to remember that the minimum requirement is around-the-clock, year-round access to skilled labour monitoring and care, two attendants at each birth and a reliable referral and transport service for those with complications. How best might that be achieved in light of what we know?

Core Proposals

In the first place, change requires a desire and commitment to do what it takes to maintain maternity services – what the SOGC has called "a chain of cooperation and shared intent." [3] At the moment, those who are benefiting from the current arrangement may not be willing to acknowledge there is a problem. Change also requires openness to fundamentally rethinking the way the system is organized, alongside wisdom to identify what incremental steps to take to get there.

With those minimum requirements in place, we are proposing the following five actions. Adopting these five proposals would go a long way toward embracing a new vision of normal childbirth in Canada. Each will be presented here, then discussed in further detail below.

1. Organize the system so that the environments of birth support the physiological processes of birth.

2. Focus on pursuing the kind of care that promotes the best outcomes for mothers and their babies.

3. Ensure there are adequate numbers of primary care providers with the skills needed to successfully support normal birth.

4. Promote a division of labour and sharing of skills that makes optimal use of various practitioners' core competencies.

5. Be diligent about implementing what is already known to be needed

1. Match the environments to the physiological process of birth

Because philosophical differences about the nature of birth itself lie at the root of many of the tensions in Canada's current system, we need to be explicit about the values that underpin a newly conceptualized organization of care. At the heart of those values should be an appreciation that birth, in women as in other mammals, is a natural process, rather than a pathology to be fixed or a risk to be managed. The organization of care would flow from that understanding, resulting in a system which treats complications as the exception rather than the rule. With such a context, birth environments, including birth sites, their distribution, and the people who staff them, would be designed and resourced in new ways.

2. Provide women-centred care that promotes the best outcomes

We know that in addition to promoting good morbidity and mortality outcomes, women report being highly satisfied with care that is relational, informed, local and empowering, characterized by one-on-one support and few medical interventions, and is embedded within an effective referral network. These seven characteristics should form the backbone of a new vision of maternity care. Doing so requires improved health human resource planning, alongside an attitudinal shift toward care that helps to dispel fear and increase women's confidence in the physiology of birth and in the care being provided to them.

3. Ensure sufficient supply to meet the demand for primary maternity care providers

A long-term strategy is clearly needed to ensure that Canada has the right number of the right mix of maternity care providers, properly located and adequately distributed across the country. They also need to be properly trained to support women through normal birth.

4. Optimize the division of health care labour

In order to accomplish the three proposals above, ideal roles for the various maternity care providers need to be clarified and pursued through incentives. Midwives, as experts in normal childbirth, should be at the centre of Canada' s maternity care team. Regulation and education of midwives should be accelerated so that they are available not only to provide care to more women, but to train other health professionals in how best to support women through uncomplicated labour. Their scope of practice could also be reviewed to include well women and well baby care in order to help fill the gaps left by the physician shortage, particularly in smaller communities. This would allow obstetricians to play a consultative role better suited to their training and skills. Family doctors could then decide if they want to be involved in this kind of relational maternity care and could opt in or out knowing that

others are there to pick up the slack. The Netherlands offers an example of a model that puts midwives at the centre of its maternity care system. Much has been written about the Dutch health care experience which may be illustrative to Canada at this juncture in our history. [11]

5. Implement what we already know

Canada has already invested in numerous maternity care papers, working groups, pilot projects and strategies which, if heeded, could move us in the required direction. [1,3,5,8] To cite recent examples, the SOGC's number one priority in its recent "National Birthing Strategy for Canada" is "listen to women's voices" and the MCP^2 project has prepared guidelines and tools for community-based, women-centred models of collaborative care. [1,3] What is primarily needed now is not further study, but action. We need to act on what we already know.

For instance, we know what the barriers to collaborative care are; it is time to work towards removing those barriers. There is consistent agreement across numerous reports and across the country on the need for the following investments; it is time to support these recommendations with resources:

- Expanded rural maternity services
- More midwives educated and employed
- More birth centres
- Harmonized standards of care
- Incentives for family doctors to stay in maternity care, including intrapartum care
- More staff so that one-on-one labour support is possible
- Better information portals for women seeking care, including improved public education campaigns about maternity care
- Integrated planning across professions, ministries and funding envelopes
- More responsive regulatory regimes
- More collaborative practice models
- Better systems for health care workers to analyze and modify their practices based on the evidence

Not only are there written reports, but actual models of collaborative practice are slowly beginning to emerge. Lessons from these experiences need to be documented and widely shared. Perhaps the most well known recent model is the Vancouver South Community Birth Program.[28] Situated in an area that had a 27% C-section rate, where 65% of birthing women received their primary care from an obstetrician, the VSCBP was a pilot project in multidisciplinary maternity care that was designed not only to improve outcomes but to build community and act as a training site for maternity care providers. Although the program grew more slowly than originally anticipated, initial client feedback has been overwhelmingly positive. Interestingly, many of the objectives of the program began with the phrase, "To develop an environment where…"

Other primary care initiatives in Canada provide opportunities for collaborative practice models. An example is the Maternity Centre of Hamilton, Ontario, where physicians, midwives, nurse practitioners and other allied health professionals work together to provide comprehensive maternity care. Collaboration in that case varies from sharing facilities and staff to sharing patient care. A similar model exists in Thunder Bay, Ontario. In both cases, mentoring and role modelling are key components for success, as is predictability for providers and their clients. [24,27] In Manitoba, collaborative practice characterizes many initiatives throughout the province as they seek to integrate midwifery care most effectively for women.

In the UK, the National Childbirth Trust has developed a resource entitled "Better Birth Environment Toolkit." NCT facilitates women's involvement in the development of new maternity facilities and offers Better Birth Environment Awards. Perhaps Canada could follow that lead. [50]

Conclusion

Where birth occurs, who is in attendance and how caregivers are trained are critical factors shaping the overall environment of birth, which in turn can be directly linked to the health of mothers and babies. Health human resource planning is a key element shaping that birthing environment in Canada. Without longer term planning and immediate action, it is quite possible that birthing women will not be able to find appropriately trained personnel to support them through their labour and birth. The conversation has moved well beyond who is attending births and who should be doing so; at the moment, Canadian women need every qualified birth attendant to 'get in the game'.

Addressing Canada's health human resource crisis represents an important and exciting policy opportunity. The emerging reality is that childbirth has become centralized, urban and technology-driven, with primary care most often being provided by specialists. Is this how we want our 'new normal' to look? This is a social policy question as much as a purely medical one, which compels us to develop new language and new approaches. Its answer requires a shift in mindset that promotes an environment of birth where women's interests and evidence-based medicine, rather than professional convenience and political expedience, drive the organization of care. Then, 'normal' childbirth in Canada will not be an unexamined default setting born out of crisis and fatigue, but will be deliberately crafted to reflect an appreciation for the expertise of women and those who are best equipped to care for them.

References Cited

1. Multidisciplinary Collaborative Primary Maternity Care Project. Publications available at http://www.mcp2.ca/english/studies_reports.asp [Accessed April 8 2008]
2. Health Canada. Changing Fertility Patterns: Trends and Implications. Health Policy Research Bulletin. May 2005.
3. Society of Obstetricians and Gynaecologists of Canada. A National Birthing Strategy for Canada. June 2007. Available at http://www.sogc.org/projects/birthing-strategy_e.asp
4. Women's Health Clinic. South Winnipeg Maternity and Birth Centre Program Proposal and Role Statement. March 2007.
5. Ontario Maternity Care Expert Panel. Executive Report: Emerging Crisis, Emerging Solutions. September 6, 2006.
6. Public Health Agency of Canada. Canadian Perinatal Health Report 2003.
7. Woolley, Pieta. C-sections rise sharply here. May 11, 2006. Available at http://www.straight.com/article/c-sections-rise-sharply-here-0
8. CIHI. Giving Birth in Canada: Providers of Infant and Maternity Care. April 2004
9. Kotaska A. Combating coercion in maternity care: does modern obstetrics deserve a wooden club as well as the wooden spoon? Presentation at the Canadian Association of Midwives Annual Conference. November 2007.
10. Hofmeyr G. Evidence-based intrapartum care. Best Practice and Research: Clinical Obstet Gyn 2005; 19(1):103-15.
11. Wreded S, Benoit C, Bourgeault IL, van Teijlingen E, Sandall J, DeVries RG. Decentred comparative research: Context sensitive analysis of maternal health care. Soc Sci Med 2006 Dec; 63(11): 2986-2997.
12. Harvey S, Rach D, Stainton MC, Jarrell J, Brant R. Evaluation of satisfaction with midwifery care. Midwifery 2002 Dec; 18(4): 260-7.
13. De Koninck M, Blais R, Joubert P, Gagnon C. Comparing women's assessment of midwifery and medical care in Quebec, Canada. J Midwifery Womens Health 2001 Mar/Apr; 26(2): 60-7.
14. Chalmers B, Dzakpasu S, Heaman M, Kaczorowski J. The Canadian Maternity Experiences Survey: An overview of findings. JOGC March 2008; 30(3): 217-228.
15. Klein MC. What's not new in maternity care? Presentation at the Canadian Association of Midwives Annual Conference. November 2007.
16. Sutherns R. Women's Experiences of Maternity Care in Rural Ontario: Do Doctors Matter? Unpublished PhD Dissertation, University of Guelph. 2001.
17. Kornelsen J, Grzybowski S. The Costs of separation: The birth experiences of women in isolated and remote communities in British Columbia. Canadian Women Studies Journal 2005; 24(1): 75-80.
18. Kornelsen J, Grzybowski S. Is local maternity care an optional service in rural communities? J Obstet Gynaecol Can. 2005; Apr;27(4):329-31.
19. Klein MC. Obstetricians' Fear of Childbirth: How did it happen? (Commentary) Birth 2005 Sept; 32(3): 207-10.
20. Sleutel M, Shultz S, Wyble K. Nurses' views of factors that help and hinder their intrapartum care. J of Obstetric, Gynecologic and Neonatal Nursing 2007; 36(3):203-11.

21. Perinatal Partnership Program of Eastern and Southeastern Ontario. Perinatal services in Ontario: How are we doing? March 2005.
22. Klein MC, Kelly, A, Spence, A, Kaczorowski, J, Grzybowski, S. In for the long haul. Which family physicians plan to continue delivering babies? Can Fam Phys 2002 Jul; 48:1216-22.
23. Rogers J. Sustainability and collaboration in maternity care in Canada: Dreams and obstacles. CJRM 2003; 8(3):193-8.
24. MacDonald C. Duty to deliver: Producing more family medicine graduates who practice obstetrics. Can Fam Phys 2007 Jan; 53:14-5.
25. Zelmer J, Leeb K. CIHI Survey: Challenges for providing maternity care services – the impact of changing birthing practices. Healthcare Quarterly 2004; 7(3): 21-3.
26. National Physician Survey, 2004, Family Physician Participation in Maternity and Newborn Care by Sex and Age Group. [Internet]. Ottawa, ON: College Of Family Physicians of Canada, Canadian Medical Association and Royal College of Physicians and Surgeons of Canada. [cited 2006 Aug 7]. Available from http://www.cfpc.ca/nps/English/pdf/Physicians/Family_Physicians/Tables/Provincial/MB/MB-9FP.pdf
27. Price DJ, Lane C, Klein MC. Maternity care by family physicians: Characteristics of successful and sustainable models. J Obstet Gynecol Can 2005 May; 460-466.
28. South Community Birth Program Final Report 2003-2006. Available from www.scbp.ca
29. Personal communication, Kris Robinson RM, January 12, 2008.
30. Canadian Broadcasting Corporation. Labour pains plague Manitoba midwifery. February 28, 2008. www.cbc.ca/canada/manitoba/story/2008/02/22-mba-midwives.html [Accessed March 3, 2008]
31. Medves J, Davies B. Sustaining rural maternity care? Don't forget the RNs. CJRM 2005 Winter; 10(1): 29-35.
32. Blais R, Lambert J, Maheux B. What accounts for physician opinions about midwifery in Canada? J Nurse Midwifery1999 July/Aug; 44(4): 337-40.
33. Stapleton SR Team building: Making collaborative practice work. J Nurse Midwifery 1998; 43(1): 12-18.
34. Klein MC. Quick fix Culture: The Cesarean-on-Demand Debate. (Guest Editorial) Birth. Sept 2004; 32(3):161-4
35. Davies C. Getting health professionals to work together. BMJ 2000 April; 320(7241):1021-2.
36. http://www.ruralmatresearch.net/ourresearch.htm [Accessed Feb 25, 2008]
37. Klein MC, Christilaw J, Johnston S. Loss of maternity care: the cascade of unforeseen dangers. CJRM 2002 Spring; 7(2):120-1.
38. Ontario Midwifery Program. Ontario Ministry of Health and Long Term Care. 2006/7 provincial database.
39. Johnson K, Daviss BA. Outcomes of planned home births with certified professional midwives: large prospective study in North America. BMJ 2005; 330:1416.
40. Reime B, Klein MC, Kelly A et al. Do maternity care provider groups have different attitudes toward birth? BJOG 2004 Dec; 111:1388-1393.
41. Sakala C, Corry MP. Achieving the Institute of Medicine's six aims for improvement in maternity care. Women's Health Issues. 2008; 18:75-8.

42. Declercq E, Menacker F, MacDorman, M. Rise in "no indicated risk" primary caesareans in the United States, 1991-2001: cross sectional analysis. BMJ 2005;330:71-72.
43. Weaver J, Statham R, Richards M. Are there unnecessary Cesarean sections? Perceptions of women and obstetricians about Cesarean sections for nonclinical indications. Birth 2007 Mar; 34(1): 32-41.
44. American College of Obstetricians and Gynecologists. ACOG Statement on Home Births. News Release. Feb 6, 2008
45. Kornelson J. Pushing for Change: Challenges of Integrating Midwifery into the Health Care System. BC Centre of Excellence for Women's Health. 2000
46. Green JM, Baston HA. Have women become more willing to accept obstetric interventions and does this relate to mode of birth? Data from a prospective study. Birth 2007; 34(1): 6-13.
47. Sutherns, Rebecca. Canadian Rural, Remote and Northern Women's Health: A Literature Review and Thematic Bibliography. Prairie Women's Health Centre of Excellence. 2002.
48. Enkin M. Beyond Evidence: The Complexity of Maternity Care. (Guest Editorial) Birth 2006 Dec; 33(4):265-271.
49. National Childbirth Trust. Creating a better birth environment. UK. Available at http://www.nct.org.uk/info-centre/articles/view/6

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