Rural Women's Experiences of Maternity Care:
Implications for Policy and Practice

by

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with

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ABSTRACT

This research investigated rural maternity care from the perspective of parturient women, care providers, health care administrators and local leaders. We found that women's experiences were bound in the complexity of relationships that were influenced by the attitudes and actions of care providers and the organization of health system services. The study took place within a dynamically changing health care environment in which three of the four study sites ceased offering birthing services during the course of the project. The lack of clearly defined policies supporting rural maternity care was reflected in a tenuous infrastructure for local birthing. This left local services vulnerable to the vagaries of practitioner's attitudes, critical incidents, the variable social and historical context of the community and geography. Literature on risk assessment provides a lens through which some of the findings may be interpreted.

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ABBREVIATIONS AND ACRONYMS

C-Section	Caesarean section
CHC	Community health council
FFS	Fee-for-service billing system
GPs	General practitioners
LHA	Local health area
multip	Multiparous
NDP	New Democratic Party
NIA	Northern and Isolation Allowance
nullip	Nulliparous
PHSA	Provincial Health Services Authority
PMR	Prenatal mortality rates
primip	Primiparous
RHB	Regional health board
RNs	Registered nurses
RRSP	Registered Retirement Savings Plan
UBC	University of British Columbia
VIHA	Vancouver Island Health Authority

PREFACE

Good public policy depends on good policy research. In recognition of this, Status of Women Canada instituted the Policy Research Fund in 1996. It supports gender-based policy research on public policy issues in need of gender-based analysis. Our objective is to enhance public debate on gender equality issues to enable individuals, organizations, policy makers and policy analysts to participate more effectively in the development of equitable policy.

The focus of the research may be on long-term, emerging policy issues or short-term policy issues that require an analysis of their gender implications. Funding is awarded through an open, competitive call for proposals. A non-governmental, external committee plays a key role in identifying policy research priorities, selecting research proposals for funding and evaluating the final reports.

This policy research paper was proposed and developed under a call for proposals in September 2002, entitled Restructuring in Rural Canada: Policy Implications for Rural Women. Research projects funded by Status of Women Canada on this theme examine issues, such as the impact of long-term care patient classification systems on women employed as caregivers in rural nursing homes; rural women's experiences of maternity care in British Columbia; farm women and Canadian agricultural policy; the employment of women in Canadian forestry and agri-food industries; and the participation of rural Nova Scotia Women in the new economy.

A complete list of the research projects funded under this call for proposals is included at the end of this report.

We thank all the researchers for their contribution to the public policy debate.

ACKNOWLEDGEMENTS

ABOUT THE AUTHORS

Dr. Jude Kornelsen is a sociologist who has undertaken numerous funded studies on the social conditions of maternity care. Current research includes investigations on rural women's experiences of maternity care, the implications of recent policy decisions on these experiences, rural Aboriginal women's experiences of maternity care, and parturient women's attitudes toward patient-initiated elective Caesarean section. Dr. Kornelsen is a Research Associate with the B.C. Centre of Excellence for Women's Health and Assistant Clinical Professor in the Department of Family Practice, University of British Columbia. Dr. Kornelsen is the Co-director for the Rural Maternity New Emerging Team.[2]

Dr. Stefan Grzybowski is a family physician researcher and Director of Research in the Department of Family Practice at the University of British Columbia (UBC) (Associate Professor). He practised as a rural physician for 12 years on the Queen Charlotte Islands/Haida Gwaii in British Columbia before moving to UBC. He is committed to building research capacity in family medicine and has a long-standing interest in research into the safety of rural maternity care. Dr. Grzybowski is the Co-director for the Rural Maternity New Emerging Team.

EXECUTIVE SUMMARY

This study examined rural women's experiences of maternity care in the context of health care restructuring and regionalization. Using a community-based qualitative research model, we interviewed 45 women, 27 care providers, five health care administrators and three local leaders in four rural communities in British Columbia to better understand the impact of the current model of maternity care on women and their families.

Evidence Base for Rural-Based Maternity Care

A number of studies have compared the outcomes of groups of hospitals of different sizes and service levels or population catchments served by different size hospitals, and have shown a range of results. The studies that showed the worst results for small hospitals or catchments of small hospitals were done in Norway and Germany, and there are some challenges to generalizing their findings to the Canadian health care context. Two smaller Canadian studies, however, showed that populations served by small hospitals had no worse pregnancy outcomes than those served by larger hospitals with more specialized care. Even more important, studies from rural Florida and Washington showed that populations without local access to maternity services have *worse* newborn outcomes than those with local access, regardless of where the constituents give birth.

In addition, recent research challenges the long-held assumption that pregnancy outcomes are related, in part, to the volume of deliveries of the care providers, ameliorating concerns over the ability of rural practitioners to maintain competency of skills and abilities. To date, research has not adequately examined the social and economic costs of the lack of local access to maternity care services in rural communities.

Policy

British Columbia lacks comprehensive and integrated guidelines for planning and managing rural maternity care. Despite a lack of understanding of the consequences of the lack of local, community-based maternity care, decisions are being made to close local services in response to fiscal constraints and some care providers' preferences and fears. This stands in stark contrast to the national policy on rural maternity care that states women should be able to give birth in their own communities whenever feasible.

Changing organizational structures, planning priorities and processes, and fiscal constraints have produced a complex environment for women, their families and those who care for them during the perinatal process. The vision articulated in policy documents produced in British Columbia in the early 1990s of "closer to home" care has not become a reality; for rural maternity care, access is uneven and unstable, dependent on the vagaries of individual providers and local authorities. Political accountability has been reduced over time in the mandates of health authorities and the new mechanisms of accountability have decreased the participation of local citizens in decisions affecting them.

Risk Assessment and Management in Maternity Care

While our review of the risk literature revealed that risk assessment is a useful tool for truly high-risk situations, its efficacy is questionable at best when applied broadly to parturient women. This is due, in part, to the lack of understanding of how psychosocial factors support or detract from the course of pregnancies, the overemphasis of assessing risk factors and not balancing risks with psychosocial and other factors that may mitigate these risks. The current model of risk assessment that focusses on biophysical factors that negatively influence pregnancy outcomes was found to be too incomplete. Pregnancy is a complex interaction of biophysical, psychological, social/cultural and spiritual factors. Risk assessment needs to integrate and further explore the effects and complex interactions of all these factors.

Findings

Results of interviews and focus groups with care providers, administrators and local leaders revealed their awareness of the difficulty practitioners have in maintaining their skills and abilities in light of the low volume of local deliveries in most small communities and the implications of this on sustainability. This awareness was underscored by the recognition that despite challenges, as long as families live in rural communities, women will get pregnant, and birth will happen. Participants were forthcoming with their perceptions of the safety of maternity care in the absence of local Caesarean section capability and how this, along with other factors, influenced the sustainability of local maternity care services. Many participants had clear ideas about what was needed to maintain local birthing services, and although the specific criteria varied among practitioners, there was strong agreement about the notion of the importance of a collaborative decision-making process around community birth services.

Birthing women who participated in this study conveyed an understanding of the realities of rural obstetrical care in a time of diminishing resources. These realities included a sense of stress related to their uncertainties around the specifics of care, difficulties in securing a continuous care provider, and the financial implications of leaving their community for care. Further themes within the narratives included participants' recognition of the importance of birth in a community, their desire for local birth, a consciousness around risk and risk assessment, and recognition of their geography and the attendant consequences for access to care it precipitated. A desire for midwifery care was expressed by many women in this study. Aboriginal participants articulated different challenges around access to care and the implications of the lack of local access.

Recommendations

This study makes evident the need for an ongoing organized and systematic transdisciplinary program of research on rural maternity care. This will provide further evidence to address adequately the key questions that will inform new initiatives or changes in existing policy directions. The organizing questions are: What are the barriers to sustainable rural maternity care? How can we address these barriers through policy and practice?

Specific recommendations, based on six guiding principles, pertain to health care system issues, local care provider issues and the need for further research. Despite the specific geographic focus of this study, these recommendations are relevant to other Canadian jurisdictions experiencing similar challenges to the provision of rural maternity care services.

1. INTRODUCTION

The Problem

Rural maternity care services are in decline in Canada. In British Columbia in the past three years, 13 of the 62 rural maternity services have ceased providing birthing support to their communities. In some cases, this evolution has been part of a larger transformation of a small rural hospital to a diagnostic and treatment centre or a health centre; in others, a limited service hospital continues. Parturient women from these communities now have to travel outside of their communities to access intrapartum and, in some cases, prenatal services. Little research has been done on the experience of women and families who can no longer access maternity services in their local communities. The study described in this report was designed to uncover rural women's stories in a way that will help us understand the social and psychological effects of limiting local access to services and how these changes might affect the birth experience. There is more to the story though. Local maternity care providers, in most cases family physicians and nurses, are also caught within the maelstrom of change. For some, no longer bearing the responsibility of providing maternity care leads to feelings of relief. For others, the loss of providing such care leads to a sense of grief over the absence of a cherished part of their practice. And for still others, who are clear in the system-level support they need to offer services comfortably, when the support is not forthcoming they recognize the lack of choice and take solace in the recognition there is nothing more they can do.

Overview of the Report

Why are these changes occurring? Is there new evidence informing policy that demonstrates the danger of small-hospital obstetrics? Is there new information about the costs or quality of care in small hospitals that presents an evidence base for these changes? This report integrates results of a comprehensive review of policy, academic and epidemiological literature that informs our current understanding of rural maternity care. As the current regionalized system of maternity care is rationalized through biomedical notions of risk, a separate review of literature on risks, risk assessment, and critiques of risk rounds out the theoretical context for the current research.

This report begins with a review of the policy literature in British Columbia over the past 15 years to provide a policy context for the roots of the current changes (Chapter 4). Ironically, within these documents there have been a number of strong recommendations advocating care that is closer to home based on the assertion of the right of rural women to birth in their own community. Despite this, in some of the communities we studied, women are forced to travel to access basic birthing support for the first time in the recorded history of the community. This is especially poignant for Aboriginal communities where there are records of local occupation that go back 10,000 years. When viewed with an appreciation of this historical context, the recent initiatives in antenatal care suggest, at the very least, the need for a comprehensive evaluation of the effects wrought by these changes. Such an

evaluation must start with an understanding of the current evidence on the safety of rural maternity care, which we present in Chapter 3.

The last major theme we address in laying the groundwork for women and care providers' stories is a review of the notion of risk. Some would have us believe rural maternity care is all about risk: risk identification, risk scoring and risk management. The rationalization of regionalization strategies around perinatal services hinges largely on strategies to assess and respond to risk identification. This has allowed us to make dramatic gains in reducing perinatal mortality, particularly for low and very low birth weight babies. But what are the implications of applying a strategy designed for a small portion of childbearing women (those with evident risk factors) to the whole population? A cogent understanding of what risk allows us to measure — and what it currently overlooks — will help us answer this question.

The research is set in British Columbia. This is partly an accident of where we live and work but in the complexity of life perhaps there are no coincidences. It is important to note that unlike Manitoba and Saskatchewan, British Columbia has not previously gone through a significant downsizing in the number of small rural community hospitals. This is at least partly due to the mountainous and coastal geography that makes travel and access to adjacent hospitals sometimes a challenge in summer, let alone winter. Nevertheless, significant closures are now taking place making our research timely. In some cases, local community maternity services have closed unexpectedly between the time study participants became pregnant and reached their due dates.

The rural communities we had the privilege of visiting all embodied an ethos unique to their location, geography, history and constituents. All were set within a context of geographic splendour that made it easy to recognize the importance and strength of the ties women may feel to their home environments. We are grateful for the participation of the mothers, caregivers and community leaders who made the research and the subsequent writing of this report possible. The communities that so generously hosted this work are mapped in Appendix A and detailed in Appendix B. The views and experiences of the women and families who choose to live and work in these communities are embodied throughout this report. It is our hope that their voices give rise to an understanding of the social realities created through the policy process. Clearly, all decisions around the provision of rural maternity care must rest on our contentment with the level to which we are able to meet their needs.

The Investigators

Dr. Jude Kornelsen, a sociologist with extensive research experience in studying the experience of birth, has been actively involved in facilitating and advocating for the implementation of midwifery across Canada. Dr. Stefan Grzybowski is a family physician with a long-standing interest in the safety of rural maternity care and how to sustain such services. Their work over the past two years has led to a number of successful grant applications. Their collaboration is founded on a mutual determination to advance the rural maternity care research agenda in order to build a stronger understanding of the needs of parturient rural women and families and how these needs can be met. Their work takes place within a recognition of the complexity of the

challenges within which rural maternity care services evolve and decline, and with a profound respect for the opportunity to try and make a difference. This report, as part of a larger research agenda, is the product of collaboration with other investigators, some of whom are listed as co-authors on this report. The final document is the product of the combined thought and enthusiasm of the whole team.

Concepts and Terminology

Challenges to the safety of small maternity services in rural communities are based on concerns over the lack of local access to Caesarean section. Although most labour and deliveries will proceed without the need for intervention and result in a spontaneous vaginal delivery, we lack the absolute predictive capacity to know when this will not be the case. This is the foundation of the argument for the need for birth to occur in very close proximity to Caesarean section backup.

Aboriginal, as used in this document, agrees with the definition used by Statistics Canada and refers to residents of Canada who can trace their origins to First Nations people who inhabited what is now Canada when the first Europeans arrived. It also includes persons who have gained Aboriginal rights under legislation (e.g., the spouses of Aboriginal persons). (Priest nd) The use of the term implies only those registered under the *Indian Act* of Canada within the context of this project. Because participants also referred to themselves as First Nations, we recognized this in the report.

Perinatal care refers to the period around childbirth, especially the five months before and one month after birth.

The **perinatal mortality rate** is the annual number of stillbirths and early neonatal deaths (deaths in the first week of life) per 1,000 total births (includes stillbirths). Stillbirths are defined here as gestational age of 28 or more weeks.

Primiparity (primip) technically refers to a woman who has completed one birth (Cunningham et al. 1993: 248), but is used frequently to refer to a woman having her first birth who has not yet given birth. To respect the participants' quotes included in the analysis, we use the terms the respondents used.

Regionalization is used within this report to refer to two processes. Within a policy context, it describes the policy process of devolving fiscal and administrative responsibilities for health care delivery from centralized planners to regional health authorities. Within a maternity health care context, it describes regionalized perinatal health care that provides different levels of care at different facilities (Peddle et al. 1983; Nesbitt 1996). The dual interpretation of the term reflects its multiple usage with the health policy and maternity care contexts, respectively.

2. RISK ASSESSMENT AND MANAGEMENT

> Since antiquity, observers have recognized that fetal and maternal morbidity
> and death are sometimes preceded by specific characteristics and situations
> (Hall 1994: 1239).

Care providers and prospective parents have always assessed and attempted to redress physical and social conditions believed to lead to poor pregnancy outcomes. In the early 1900s, maternity care textbooks started developing lists of risk factors correlated with poor outcomes. In the 1960s, risk-scoring systems became common and the number of formal, standardized ones grew dramatically (Saxell 2000). Although the conditions assessed and methods of assessment have changed radically over the years, the concept of risk assessment and management in maternity care continues to be an important component of care (Backett et al. 1984; Alexander and Keirse 1989; Saxell 2000; Paling 2003). Contemporary risk assessment combines the clinical judgment of care providers within the context of policy guidelines and standardized risk assessment indices (LeFevre et al.1989; Saxell 2000). In the last 30 years, the use of standardized risk assessment indices has become standard practice for many maternity care providers even though their accuracy and efficacy is unclear (Alexander and Keirse 1989; Chalmers et al. 1989b; Enkin et al. 2000).

Growing academic and clinical literature calls into question the theory and practice of risk assessment, and the attendant implications of a discourse focussing on the aggregate probability of a negative outcome (Alexander and Keirse 1989; Chalmers et al. 1989b; LeFevre et al. 1989; Gregg 1993; Lupton 1993; Enkin 1994; Hall 1994; Handwerker 1994; Enkin et al. 2000; Saxell 2000; Viisainen 2000; Zadoroznyj 2001; Stahl and Hundley 2003). Further to this are concerns about the excessive reliance on risk assessment tools which, it has been suggested, give rise to a reductionist view of pregnancy and birth as a biomedical event as opposed to a holistic and integrated life process (Enkin et al. 2000; Saxell 2000; Walsh 2003).

It is crucial to understand how the current interpretation of risk assessment has influenced standard practice in maternity care at a structural level, but also how notions of risk have been internalized by care providers and how this understanding influences practice at a physician–patient level. In this chapter we outline the current state of risk assessment and management in maternity care and review critiques of standard interpretations. This review provides the foundation for an augmented framework of risk assessment around decisions regarding location of birth for rural women based on the results of this research project (see chapters 7 and 8).

Risk Assessment: An Overview

> Uncertainty is a permanent part of life and life's beginnings. It is also at the
> heart of the definition of risk (Hall 1994: 1239).

Historically, risk assessment referred to the probability of the occurrence of an event. The term has, however, lost its neutral connotation and is now associated with the likelihood of a

negative event (Douglas 1990 in Saxell 2000). This approach is assumed by the World Health Organization when it suggested: "Risk implies that the probability of adverse consequences is increased by the presence of one or more characteristics or factors" (Backett et al. 1984: 8). Orienting our thought around the probability of negative outcomes has significant psychosocial implications in maternity care for both providers and consumers including giving rise to the belief that normal birth will only occur in spite of potential obstacles or, as the common phrase suggests, that "birth is only normal in retrospect." Prenatal risk assessment grew out of a desire to anticipate what these obstacles may be (Saxell 2000) and reflected a concern in relying on clinical judgment alone to identify such obstacles prospectively. As several authors note, this leads to the imperative to develop methods to "identify factors associated with adverse perinatal outcome" (LeFevre et al. 1989: 691; see also Hall 1994) objectively.

The impulse driving the desire to assess and manage risk was found in evidence-based practice, a cornerstone of contemporary health care. Sackett et al. (1996: 71) noted: "Evidence based practice is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients…evidence based practice means integrating individual clinical expertise with the best available external clinical evidence from systematic research." A significant development in the move toward evidence-based practice in maternity care was the publication of *Effective Care in Pregnancy and Childbirth,* (Chalmers et al. 1989a), which reviewed existing scientific research informing standard and recommended practice in pregnancy and childbirth.

Risk-Scoring Systems: Tools and Techniques

> The primary purpose of a risk-scoring system is to classify individual women into different categories, for which specific actions can be planned, advised, and implemented (Enkin et al. 2000: 49).

An American-based 1989 review (Alexander and Keirse) of the literature identified at least 45 standardized risk-scoring systems designed to assess risk factors related to negative pregnancy outcomes. In 1994, Hall identified an additional 12 risk assessment systems in widespread use in Canada. According to LeFevre et al. (1989: 691), all risk-scoring indexes have three principles in common:

• the belief that some number of obstetric risk factors are identifiable at a point prior to delivery;

• that these risk factors are quantifiable; and

• that these quantifiable risk factors are additive, with the sum of the values for each individual factor representing the overall level of obstetric risk.

The risk-scoring systems consistently include an assessment of biomedical factors. Very few, however, assess socio-economic factors, such as income level, social support and relationship stress, despite these having strong and well documented relationships to poor pregnancy outcomes (Cramer 1987; Alexander and Keirse 1989; LeFevre et al. 1989; Carroll et al. 1994; Hall 1994; Saxell 2000).

This is, however, where the similarities end, as each scale tends to assess different risk factors (Alexander and Keirse 1989; Hall 1994; Handwerker 1994; Saxell 2000). Some give each risk factor different relative weight toward the final score; others weight all factors equally (Saxell 2000). Some scoring systems require the risks to be assessed once and others require multiple assessments during the pregnancy (Hall 1994; Saxell 2000).

As perinatal services have been regionalized (with the justification of improving perinatal care and outcomes, and easing budget restraints), standardized risk-scoring systems have become increasingly popular as a way to identify "high-risk" pregnancies that need the services of larger, regional centres (LeFevre et al. 1989; Hall 1994; Stahl and Hundley 2003). Unfortunately, as outlined in the next section, the reliability and specificity of these systems is in question and they do not capture the complexity of pregnant women's lives.

Critiques of Risk Assessment and Management in Maternity Care

During the past 20 years, many researchers and theorists have undertaken critiques on the contemporary use and theory of risk assessment and management. These critiques fall generally into three categories: theoretical critiques, critiques of the risk-scoring systems and critiques of risk assessment implementation. The rest of this chapter explores these themes.

Theoretical Critiques of Risk Assessment and Management
> A reductionist philosophy is a very bad way of understanding how biological living systems work. It's only part of a much richer picture. A reduction philosophy produces some extremely dangerous ideologies of biological determinism and some extremely hazardous technologies (Rose in Hall 1994: 1239).

Risk assessment and management have been promoted as being an unbiased, objective and rational way of responding to risks in pregnancy (WHO 1978; Backett et al. 1984). Recently, however, this approach has been called into question.

In a recent editorial, Denis Walsh (2003: 474) declared: "Risk management needs to [be] exposed as not objective, rational and value-free, but as socially constructed, biased to certain values and politically motivated to reinforce the powerful in health care." The tools and policies used for risk assessment contain professional and institutional bias that affects which risks are examined and which are overlooked (Walsh 2003). In addition, very little has been done to address cultural bias within these systems. (Handwerker 1994; Saxell 2000). Almost all have been developed with an individually based focus of a Western understanding of health and are limited to *physical* health to the exclusion of the emotional, social and spiritual aspects that have come to be recognized as determinants of physical health (Oakley 1992; Enkin 1994; Saxell 2000). As Nesbitt (1989: 696) noted, biomedical risk factors may have differential cumulative effects when combined with various socio-economic and demographic factors. Ignoring psychosocial factors in assessment of pregnancies is especially significant in rural primary care settings where traditional biophysical risk factors are less common. As LeFevre et al. (1989: 692) noted, in these settings, "it may be that socioeconomic and psychosocial factors are of relatively more value."

A notable exception to the exclusion of emotional, social factors is the ALPHA form recently developed and evaluated by Canadian researchers (Reid et al. 1998; Midmer et al. 2002, 2004). Even this tool, however, only assesses psychosocial factors that may detract from pregnancy outcomes. It does not measure psychosocial strengths which may mitigate other risk factors or improve outcomes.

Many claim that risk discourse has led to changes in the perception of pregnancy as a natural process occasionally needing some intervention to protect the health of the mother and baby, to being viewed as an illness that requires constant monitoring and intervention (Duden 1993; Gregg 1993; Lupton 1993; Page 1993; Enkin 1994; Hall 1994; Saxell 2000; Kitzinger 2002; Nolan 2002; Stahl and Hundley 2003). The perceived need for such monitoring and intervention creates a power imbalance between caregivers and birthing women, and diminishes women's belief in the ability of their body to give birth (Saxell 2000; Viisainen 2000). Our cultural lack of confidence in our bodies (and the attendant metaphor of body as a defective machine in need of repair) stems from and reinforces a reductionist view of pregnancy and birth, limiting the potential for understanding the process as an integrated web of physiological, psychosocial and spiritual/environmental complexity (Lupton 1993; Saxell 2000; Walsh 2003).

Researchers have also documented how caregivers can use risk discourse to "scare" parents to follow their advice (Saxell 2000; Stahl and Hundley 2003). The possibilities of a poor outcome are presented, but parents are almost never given information on the number of healthy births that occur given the same risk factors (Lupton 1993). In addition, a growing number of people have documented how care providers may include a subtext of morality in risk discourse with prospective parents (Lupton 1993; Saxell 2000; Viisainen 2000). Parents are left with the impression they will be blamed for poor outcomes or stigmatized as high-risk if they choose to deviate from their care providers' recommendations (Viisainen 2000). Far from being an objective and rational mode of assessment, risk discourse can become a form of control invoking fear and morality (Lupton 1993; Hall 1994; Saxell 2000; Viisainen 2000).

In fact, in much of the discourse, the woman's body is the locus of risk (Viisainen 2000). It is the woman and her body that jeopardize the health of the potential baby (Oakley 1992). This was furthered by the growing profession of obstetrics with its focus on monitoring and surveillance, and an ethos of pathology around birth. "Obstetricians became fetal advocates and women were left to mount their struggle against an adversary who had acquired a potent ally in the fetus" (Arney 1982: 136-137; see also Oakley 1992; Duden 1993; Enkin 1994). The iatrogenic potential of medical interventions as a source of risk, however, is far less prevalent in the discourse and is usually only considered in the alternative literature despite the known risks associated with certain interventions (Oakley 1992; Viisainen 2000).

Given the potential for the language of risk to be used to influence a preferred course of care due to the nature of the presentation of information, some authors have argued it poses challenges to the process of informed consent (Saxell 2000). Informed consent

"is an individual's autonomous authorization of a medical intervention…[and] it is also a formal process that institutions require before permitting procedures" (Whitney et al. 2004: 54). According to Mann and Albers (1997), there are two principles underlying the theory of informed consent: *beneficence* and *respect for autonomy*. Beneficence is the concept of doing no harm and promoting the well-being of the patient. Respect for autonomy includes honouring peoples' "views, choices and values and not impeding the patient's self-determination" (Saxell 2000: 95). While a discussion of risks is necessary to obtain informed consent, the power imbalance inherent in the care provider–patient relationship and the subtext of morality, which are evident in discussions, infringe on the second principle and thus make true informed consent more difficult to obtain.

The application of our current understanding of risk in pregnancy and childbirth has led to a cultural understanding and practice of pregnancy that is informed by catastrophic thinking. In part, this emanates from our cultural discomfort with ambiguity and uncertainty, and the need to be predictive, but is augmented by the imperatives and assumptions contained in our social organization, which privilege the availability and use of technology and institutional solutions to local problems. This is reflected in the choice of the nature of information presented, with a current focus on physiological/biomedical evidence to the exclusion of discussions of the psychosocial or spiritual risks inherent in a given course of care. Given the cultural biases embedded in the intent and language of risk, care providers are vulnerable to using this discourse to give credence to decisions that support factors, including comfort level and attitudes toward appropriate levels of risk, that women *ought* to assume.

Critiques of Risk-Scoring Systems

> What is the evidence about standardized obstetric risk scoring? Does it improve perinatal outcomes? Does risk scoring have the characteristics of a good screening tool? Is it possible that risk scoring might be harmful? Is the emperor wearing clothes (Hall 1994: 1239)?

Despite the plethora of risk-scoring systems, all are vulnerable to critiques concerning the inappropriate application of risk-assessment scores to individual pregnancies, the lack of inclusion of psychosocial predictors in such scores and the overall reliability of scoring systems.

"Obstetric risk scoring presumes a measure of regularity in pregnancy outcome" (Hall 1994: 1241) when, as has been suggested earlier, there is a range of normalcy, which defies regularity and predictability. Women with no previous risk factors may encounter difficulties, and many with one or more risk factors will have a perfectly normal pregnancy, labour and delivery. This is a product of the confusion between correlation and causation. While a characteristic of pregnancy or "risk factor" may be associated with adverse outcomes, it may not be causally related. In fact, with few exceptions, it is not understood how the vast majority of risk factors affect the pregnancy. *Controlling* identified risk factors, therefore, may have little or no effect on outcome, thus defeating the purpose of the risk assessment (Alexander and Keirse 1989; Hall 1994; Enkin et al. 1995, 2000). Several authors have pointed out how this negates the rationality behind the continued use of risk assessment for all but the highest of risk pregnancy (Hall 1994; Saxell 2000) and, indeed, this is a gap in the literature. Perhaps

Enkin (1994: 133) captured the reason behind the continued use of risk assessment well when he wrote: "Objecting to the risk management approach to childbirth is difficult, because the idea of risk management is a product of the culture in which we live. It is so basic to maternity care today that it is difficult to imagine any other model of care."

Beyond the erroneous application of risk assessment results to individual pregnancies, risk indexes are remiss in identifying the strongest predictors of poor perinatal outcomes. For instance, in Canada, Hall (1994) found that none of the 12 risk-scoring systems he studied identified Aboriginal status and only two of the 12 acknowledged any "social" factors as determinants of obstetric risk, despite the fact that poverty and Aboriginal status were recognized by the Canadian Institute of Health Research as the two strongest predictors of stillbirth and perinatal death in Canada. Hall also found that most ignored other very important risk factors such as smoking, alcohol consumption and current fetal anomalies. These oversights are particularly significant when risk assessment is applied to decisions regarding location of birth for rural women, many of whom are Aboriginal or embody other socially complex factors. The lack of cultural sensitivity in standardized risk assessment leads to questions of cultural *and geographic* generalizability. LeFevre et al. (1989) demonstrated that, on at least one risk-scoring system, *the standardized results do not generalize to rural women.* They assert this raises serious doubts about the generalizability of other risk-scoring systems most of which are standardized on urban populations.

Many authors have pointed out that risk-scoring systems only measure quantifiable factors, but many unquantifiable factors also influence pregnancy (Enkin and Chalmers 1982; LeFevre et al. 1989; Saxell 2000). As Enkin and Chalmers (1982: 285) pointed out, "the effects of warmth and kindness on measurable outcomes of pregnancy may be difficult to demonstrate, but these qualities are simply good in themselves. Many things that really count cannot be counted."

There is also conflicting evidence about the reliability of risk-scoring systems. For example, the number of false positives and false negatives is much higher than would be tolerated for other screening tests (Alexander and Keirse 1989; Hall 1994; Saxell 2000; Stahl and Hundley 2003). In fact, Hall (1994: 1242) claimed that in Canada "[a]bout half of perinatal mortality and morbidity occurs in 'low-risk' pregnancies," and some researchers have estimated the false positive rate as high as 96 percent (Fortney and Whitehorne 1982 in Saxell 2000; see also Alexander and Keirse 1989; Hall 1994). A review of the Ontario Antenatal Record risk assessment guide also found it only had a very modest level of reliability (Hutchinson and Milner 1994). Ultimately, the lack of reliability among the scoring and assessment systems leads to a lack of clarity concerning the differential implications of results. As Hall (1994: 1241) noted, "there is no evidence that a woman with a risk score of 9 is three times more likely to have a problem than a woman whose score is 3."

In addition to the lack of specificity and reliability, the outcome of the application of risk-scoring systems (and often risk assessment tools) is that pregnancies may be labelled high risk. Researchers in British Columbia and Germany examined the effect on pregnant women of being labelled high risk (Saxell 2000; Stahl and Hundley 2003). Both studies found that risk labelling may negatively affect a women's psychosocial state by causing states of

increased stress and feelings of lack of control and powerlessness. In rural communities, this effect is compounded by the financial, physical and social implications of having to leave their home community to give birth and the additional stress this causes.

Critiques of Risk Assessment Implementation

> In situations of true high risk, [the risk management approach] has provided good results. But a form of care with unquestionable benefits for a few is not necessarily good when applied to the many (Enkin 1994: 133).

Despite the reasoned caution by Enkin, risk assessment has been applied to "the many" in spite of the lack of evidence of the efficaciousness of such an approach (Alexander and Keirse 1989; Enkin 1994; Enkin et al. 1995; Enkin et al. 2000; Saxell 2000; Walsh 2003). Other critiques of implementation include the potential influence of racial and cultural stereotypes, the lack of consideration of the importance of social context, difficulty in communicating results to prospective parents, differences in prioritizing risk categories between care providers and birthing women, and the increasing fear of litigation and subsequent reliance on risk assessment in hopes of avoiding lawsuits.

There is growing evidence that conclusions drawn from the assessment of risk and determination of risk level are often affected by the caregivers' racial and cultural stereotypes (Enkin 1994; Hall 1994; Handwerker 1994; Saxell 2000). Handwerker described instances where one care provider assessed the same behaviour in radically different ways in patients from different races. Incorporating race as a risk factor is only advantageous, however, if race is interpreted alongside other social determinants of health, such as education and socio-economic status (Cramer 1987).

As noted earlier, the assessment of risk factors is often limited to the woman and her biomedical condition. Rarely are other factors considered, and caregivers are even less likely to do the risk assessment with an understanding of the woman's social and family support systems (Enkin 1994; Saxell 2000). By excluding the woman's support systems in the analysis of her health, it is likely the caregiver will overlook both potential risk factors and supports that could mediate known risks. This may be particularly relevant to rural parturient women, many of whom have extended social support networks that emanate out of the value they place on belonging to a community.

An important part of the implementation of risk assessment concerns the communication and understanding of the risk factors and the options to deal with potential risks. A growing body of literature suggests the effective communication of results is a significant shortcoming of risk assessment strategies (Alaszewski and Horlick-Jones 2003). Prospective parents often have a difficult time conceptualizing risk probabilities like 1 in 100,000. Often, even after careful explanation, parents' perception of the risks differ from those of their caregivers. These differences in understanding of risk may arise from a differential prioritization of risk categories between care providers and patients (McClain 1983; Handwerker 1994; Saxell 2000; Viisainen 2000; Kitzinger 2002; Stahl and Hundley 2003). Enkin (1994) noted that the risks considered by physicians generally fall into one of three categories: risk to the mother, risk to the infant and risk to the physician. Risks considered by the parents also include risks

to the mother and infant; however, parents often consider risks to their other children, the extended family, the community and the risk of medical intervention (Chamberlain and Barclay 2000; Saxell 2000; Viisainen 2000). As noted above, this comprehensive interpretation of risk within the realities of a birthing woman's life is curtailed by standardized risk assessment tools or is lacking, if care providers rely solely on such tools in their decision-making processes.

Finally, there is a growing critique that risk assessment is increasingly being driven by a fear of litigation as opposed to medical need or evidence-based medical practice (Enkin 1994; Saxell 2000). "Doctors report practicing defensive medicine, a tendency to regard patients as adversaries" (Enkin 1994:133), often using more laboratory tests and interventions, such as Caesarean sections than evidence-based practice would suggest (Chalmers et al. 1989b; Enkin 1994). Enkin attributed this to the rising costs of malpractice insurance and care providers' perception of the risk of being sued. Enkin, an American researcher, also noted that despite the rate of malpractice claims in Canada being one eighth the rate in the United States, the perception Canadian physicians have of the risk of being sued is "almost identical" (Enkin 1994: 133). The emergence of risk management offices and risk co-ordinators in hospitals supports this contention. In addition, there is a growing body of literature advising caregivers on common sources of litigation and how to avoid these using risk assessment techniques (e.g., see Simpson and Knox 2003).

Risk Assessment in Maternity Care: Toward a Holistic Approach

> [T]he pregnant body is not simply a machine but instead a complexity of mind, body, feelings and emotions, all impacting on the well-being of the fetus (Saxell 2000: 102).

Other reviews of risk management have suggested changes to risk assessment in maternity care to provide a more holistic and balanced approach to weighing the evidence. Changes must be based on an interpretation of health that exceeds the constraints of biomedicine to include the myriad of other psychosocial influences and an acknowledgment of the intertwining of birth and death. As Nolan (2002: 130-131) noted, caregivers "need to try to re-establish the understanding and acceptance, which have been lost over the years, that birth and death and birth and illness are sometimes closely related." She argued that it is a care provider's responsibility to help parents prepare for these possibilities as part of their discussions about risk and informed consent.

An acknowledgment of the possibility of unfortunate outcomes as inherent in birth (as in life) may give rise to an acceptance of uncertainty and thus mitigate our need for prediction and control over the birthing process. Creating a less urgent context for considering the probability of negative outcomes may lead to the recasting of risk assessment as one of several tools practitioners may use to better understand the composite experiences of a parturient woman. From this perspective, we may be able to develop more accurate understandings of the validity and shortcomings of risk assessment tools and strategies, enhancing our understanding of the limitations of results.

Walsh (2003: 474) advocated the need for caregivers to change from assessing only risk factors to assessing "the factors likely to bring benefit in this situation." He felt this approach would lead to a more holistic handling of maternity care and would encourage caregivers to consider factors not normally considered in the Western medical tradition but that are, nonetheless, important for the well-being of the woman, her child as well as the family and community.

Once structural limitations to the concept of risk assessment are understood, further modifications may be made to the details of the process. For example, it has been suggested that care providers need to find ways to acknowledge and address their stereotypes and racist concepts in interpretations of risk scoring (Hall 1994; Handwerker 1994; Saxell 2000). Until this is addressed, risk assessment will continue to encourage more, usually unnecessary, interventions on women from minority socio-economic backgrounds.

Risk status in pregnancy also needs to be seen as a fluid and ever-changing factor in pregnancies. It is not sufficient to assess risk and benefits once or even twice in a pregnancy (Alexander and Keirse 1989). Instead of the current practice of only referring women to higher and higher levels of specialist care, there needs to be the possibility to refer a woman to lower levels of care if a risk factor is successfully mitigated or she has other benefit factors that mitigate the potential risk factor(s) which precipitated her referral to a higher level of care (Stahl and Hundley 2003). In other words, referral in maternity care needs to be a two-way street with women moving to higher or lower levels of care as appropriate for the changing situations.

Summary

While risk assessment has proven to be a useful tool for truly high-risk situations, its efficacy is questionable when applied broadly to parturient women. This is due, in part, to the current lack of understanding of how psychosocial factors support or detract from the course of pregnancies and the overemphasis on only assessing risk factors and not balancing those with strengths and supports that may mitigate other factors. The current model of risk assessment that focusses on biophysical factors and only on factors that negatively influence pregnancy outcomes is too simple. Pregnancy, however, is a complex interaction of biophysical, psychological, social/cultural and spiritual factors that Western medicine has hardly begun to understand. Risk assessment needs to integrate and further explore the effects and complex interactions of all factors that influence pregnancy, labour and delivery within the context of the woman's ongoing life to give care providers, women and their families a more realistic view of pregnancy and an augmented framework of risk assessment around decisions regarding location of birth.

3. THE SAFETY AND EFFICACY OF LOCAL MATERNITY CARE FOR RURAL WOMEN

This chapter reviews the literature related to rural maternity care in industrialized countries. Tracing this limited, but growing body of literature to its origins, the chapter begins with an introduction to the first research questions and analyses about the safety of regionalized systems of perinatal health care and particularly the safety of small, rural obstetric units. Noting that the onus has been to prove the safety of small rural maternity care services in the face of assumptions they were less safe than centralized, specialized service units, the chapter records the findings of studies comparing perinatal mortality rates and birthweight-specific perinatal mortality rates across different service levels, including those services without Caesarean section capabilities. The structure and practices that support a safe and efficient regionalized system of maternity care are discussed with specific attention to the role of risk management. It is noted that there is little research about the unique factors that affect risk management practices in rural settings. A thorough review of the health human resource challenges facing rural maternity care is included, with particular focus on the Canadian context. The chapter then documents the evidence related to the effects on perinatal outcomes of not providing local maternity services in rural areas and concludes that the evidence is inconclusive, despite policy and practice trends that currently undermine the continuance of such services.

Rural Maternity Care as a Research Topic

Rural maternity care was first systematically approached as a topic of research for health services policy in Canada, the United States and other industrialized countries during the late 1970s and early 1980s. The impetus for this new focus of medical and health policy analysis was the development of systems of regionalized perinatal health care. Regionalized perinatal health care refers to a maternity care system that recognizes that different levels of service are provided at different facilities, usually with:

- community-based small facilities providing maternity care appropriate for uncomplicated pregnancies with a likely outcome of vaginal birth;

- sub-regional facilities where birthing women are referred for standard complications of pregnancy requiring access to attendant obstetric and neonatal care; and

- tertiary obstetric units in centralized (usually urban) locations that provide the highest level of specialized obstetric and newborn care including a neonatal intensive care unit.

Therefore, we can think of regionalized perinatal health care as the organization of maternity and newborn services such that complicated pregnancies are transferred to the most appropriate level of care. The term "rural" has been variously interpreted in the health services literature. For this paper, rural refers to areas, including communities, with populations of no more than 10,000 residents that are outside of the commuting zone of larger urban centres (Statistics Canada 2001).

There is a long-standing and continuing lack of consensus over what constitutes an ideal maternity care system for rural populations. As Canadian family medicine researchers Black and Fyfe noted in 1984 (p. 571): "The degree to which services should be centralized and the number of units that should be closed are controversial questions." This controversy is reflected in changing policies and practices that persist today, as well as ongoing research that seeks to define the optimal model of care and investigate different models' operating assumptions, actual effects and outcomes. As Hein (1980: 540) wrote in his introduction to a study of Iowa's regionalized perinatal health care system: "While the overall goals of all regionalized systems are similar, the approaches used to meet specific needs must vary." In seeking to illuminate this controversy, medical researchers have focussed on safety issues. Hence, most rural maternity care research has included evaluation of newborn outcomes using perinatal mortality rates over time and comparing the different maternity care service levels in a regionalized system (Hein 1977, 1980; Ryan 1977; Perelman and Farrell 1978; McCormick 1981; Peddle et al. 1983).

Since the early 1980s, other researchers have examined the safety of rural maternity care services in different jurisdictions and, while the weight of evidence supports the provision of local services within a regionalized system of care, some controversies remain. The preoccupation with comparing perinatal mortality rates (PMR), including the more refined birth weight-specific PMR across hospital service levels and population catchments, has not been conclusive. The social and economic consequences of the lack of local access to maternity care services have not been studied systematically. Some authors have considered the potentially disruptive effects of birth away from a women's home community, but in-depth investigations of rural women's perspectives and experiences of various maternity care services are missing from the rural maternity care literature. A broader understanding of the implications of access and the lack of access to rural maternity care services is required to inform policy and practice.

The Safety Question: What Is Safe Rural Maternity Care?

The question of safety in rural obstetrics has been examined in a number of studies since Hein (1977, 1980) deliberated on Iowa's 1973 policy directive to try to provide medical care as close to the patient's home as reasonably possible, and thus to strengthen rather than consolidate existing services. Over the last 30 years, policy makers have struggled to plan and maintain appropriate and effective birthing services for rural women without the evidence base of relevance to rural Canada that is still so sorely needed.

Without doubt, improvements in neonatal care technologies since the 1970s have greatly reduced perinatal mortality rates in industrialized countries like Canada as we have improved our ability to provide intensive care services to particularly premature, low birth weight and sick babies (Peddle et al. 1983; Nesbitt 1996). The relatively small number of affected infants and the huge cost of these tertiary services mandate their location in large population centres (Peddle et al. 1983; Nesbitt 1996). Neonatal emergency transport systems have evolved to move vulnerable newborns from peripheral birthing locations to these tertiary services. The rationale for a regionalized system of rural maternity care is to ensure that every pregnant

woman has access to the level of care she requires for a healthy childbirth. As described earlier, in most cases this rationale leads to a system with distinctive service levels.

- Level I hospitals are small rural community obstetric units "wherever geographically necessary" (Peddle et al. 1983: 170) that provide maternity care for low risk or predicted uncomplicated births.

- Level II services serve a larger regional population and provide some specialized maternity care services for moderate to high risk or complex births.

- Urban, often university-based, Level III facilities house the most specialized perinatal intensive-care technologies and personnel.

Two leading questions in evaluations of such regionalized maternity care systems need to be answered.

- Are Level I services safe?

- Is the regionalized system safe?

In an overview of the rural maternity care research literature, it becomes clear the onus has been to prove the safety of small rural maternity care services in the face of assumptions that they were less safe than centralized, specialized service units. Authors in a number of different jurisdictions have attempted to answer this question grouping hospitals by service levels. The approaches have either grouped births by hospital of birth (hospital-based results) or assigned births to a service level by the residence of mother regardless of where the birth took place (population catchment based). Methodologically, the hospital-based studies have had to adjust for referral bias, while the population catchment studies have had to rationalize reasonable catchment criteria. Rosenblatt et al. (1985: 429) examined New Zealand's regionalization experience between 1978 and 1981, and described how "small maternity hospitals are being closed, partly because of fears that the quality of care may be inferior in small hospitals (the economic efficiency of smaller units is another factor)." Seeking to understand whether this fear was justified, these health researchers set out to answer the questions: "Where should babies be born, and who should deliver them?" and "Is there a volume threshold below which obstetric care becomes unduly hazardous for patients?"

In the United States, family physician researchers have noted that obstetricians, lawyers and federal health planners have sought to classify all pregnancies to be potentially high risk in terms of labour and delivery complications, and have recommended that all small, rural, family physician-served obstetric centres be closed (Chaska et al. 1988). Ontario family physician researchers Black and Fyfe (1984: 572) stated: "We need to know more about the safety of small obstetric units before recommending that they either upgrade their services or close." In Nova Scotia, researchers Peddle et al. acknowledged the realities of life in rural Canada by stating: "Ideally, every newborn infant should have immediate access to such [perinatal intensive care] services, if required. This is obviously not feasible because of cost and geographic realities."

Most studies focussing on the safety of rural maternity care services have used perinatal mortality rates and birth weight-specific perinatal mortality rates as the key outcome measure. By comparing birth outcomes of Level I facilities with those of levels II and III facilities, researchers have sought to uncover whether or not Level I services are equally or less safe than more specialized obstetric centres.[3] Such comparative studies have almost all supported the conclusion that within a regionalized system of care, perinatal mortality rates are similar across all service levels. A Canadian sampling of studies that have established the safety of small rural obstetric units include the following.

- Peddle et al.'s (1983) evaluation of Nova Scotia's community-based hospitals found the lowest perinatal mortality rates at these small hospitals (accounting for 23 percent of all births in the province) compared to regional (29 percent of provincial births) and tertiary hospitals (47.9 percent of provincial births).

- Black and Fyfe's (1984) analysis of outcomes of all obstetric cases in northern Ontario between 1980-82 (24,524 births) found no significant differences in perinatal loss rates among six classes of small hospital service levels.

- A forthcoming study in British Columbia comparing population-based rural maternity care outcomes by local service catchments for 1994-1999, shows no differences in perinatal mortality rates across service levels ranging from small obstetric units with no Caesarean section capabilities through to large obstetric units with 24 hour Caesarean section capabilities and serviced by specialist obstetricians (Grzybowski et al. in progress).

These studies, and others from the United States (Hein 1980; Chaska et al. 1988), New Zealand (Rosenblatt et al. 1985), Australia (Woollard and Hays 1993; Cameron and Cameron 2001) and Finland (Hemminki 1985; Viisainen et al. 1994) provided an important evidence base for accepting the safety of small rural maternity care services within a regionalized network of care. They support the assertion that "'safety' cannot be used as a basis for centralizing birth care in large Level III facilities" (Viisainen et al. 1994: 4).

The question of whether local rural maternity care services require Caesarean section capabilities does not yet have a clear answer in the medical literature. A recent hospital-based study (1,132 women) in a rural region of New Mexico presents data that support the safety of hospitals without Caesarean delivery capability that are within an integrated perinatal system. The study found that over two thirds of all local women were able to give birth at the hospital without Caesarean section capabilities, less than 10 percent of all local women were transferred during labour to a facility with operative facilities, the population's perinatal mortality rate was similar to the national rate, and the lack of surgical facilities did not cause major neonatal or maternal morbidity (Leeman and Leeman 2002). In Canada, comparative studies have not found any evidence in terms of negative birth outcomes that the lack of Caesarean section capabilities makes a small obstetric unit less safe, as long as it is embedded in a regionalized system of maternity care (Black and Fyfe 1984; Grzybowski et al. 1991). The literature consistently acknowledges that a local obstetric unit's risk-

screening procedures and transport protocols are important factors that support their ability to provide maternity care services safely without Caesarean section capabilities.

It is relatively common in Canada for local rural obstetric units to operate without Caesarean section services. A 1995 study showed that 125 of 576 Canadian hospitals providing local obstetrics were doing so without Caesarean section backup on site (Levitt et al. 1995). The B.C. Reproductive Care Program (1997) documented that in 1996 there were 22 hospitals in British Columbia delivering less than 250 babies per year that did not have on-site Caesarean section capabilities. Recent comparative research in British Columbia demonstrates, not surprisingly, that the availability of Caesarean section capabilities is associated with a greater proportion of deliveries done locally (from 31 to 64 percent) (Grzybowski et al. in progress).

Rural maternity care researchers consistently qualify that the safety of local obstetric units depends on them being embedded in a regionalized system that also provides more specialized levels of care (Hein 1980; Peddle et al. 1983; Rosenblatt et al. 1985; Hogg and Lemelin 1986; Viisainen et al. 1994; Nesbitt 1996). This type of organization gives local maternity care providers and rural women the option of choosing a service level that is appropriate to the kind of care they predict the birth may require. As Rosenblatt et al. (1985: 431) defined, an effective rural maternity care model is "a tightly integrated, pyramidal system, in which most high risk patients are identified by general practitioners and sent to more major referral centres before delivery. In this context, obstetrics *is* safe in small hospitals." To evaluate how the system functions as a whole in ensuring appropriate service levels to women who require more specialized maternity care and those who do not, researchers have ascribed perinatal loss rates to place of residence (or catchment area) of the mother, rather than the facility where she gave birth (Black and Fyfe 1984; Rosenblatt et al. 1985; Lemelin 1986; Viisainen et al. 1994; Grzybowski et al. in progress). These studies are concerned with the optimal performance of a system's referral practices; that is, the local physicians' abilities to screen effectively and select uncomplicated births for local delivery and refer higher risk or complicated births to larger, more specialized centres. As Lemelin queried (1986: 214) in his study of rural obstetrics in the Gatineau Hills of Quebec: "Are some units transferring too many patients, while others are keeping some that should be transferred?"

The efficiency of a local unit's risk management screening and associated referral practices in a regionalized perinatal system can be investigated according to the number of low birth weight infants allowed to be delivered in a small rural hospital as well as the transfer rates as a proportion of hospital admissions (Lemelin 1986). Specifically, an effectively functioning regionalized system would have low birth weight babies born in tertiary care facilities where they can receive intensive care, normal birth weight babies not requiring birth interventions (e.g., emergency Caesarean section) born in local facilities and a low rate of transferring women from local units to distant specialized units during labour or delivery. Unfortunately, as Baird et al. (1996: 225) noted, comparisons among various systems are difficult because each unit and system works "according to its own history and local needs." The consensus among studies of referral patterns from small rural obstetric units to distant specialized centres is that local family physicians need to be able to assess each local woman's risk for

a complicated birth and refer her accordingly (Rosenblatt et al. 1985; Hogg and Lemelin 1986; Viisainen et al. 1994; Nesbitt 1996). Simply put: "The success of the unit rests on sound case selection" (Baird et al. 1996: 225). Peddle et al. (1983: 175) referred to this practice as "the principle of empowerment whereby decision making is left in the hands of local health care providers." Accordingly, rural family physicians may be regarded as the organizing force or filter for a regionalized rural maternity care system. Unfortunately, as discussed in Chapter 2, the current models of risk assessment have serious deficiencies, which must be addressed to allow risk assessment to support these kinds of decisions more effectively.

The Interface of Safety and Risk in Rural Maternity Care

Risk management is designated as a defining principle in the 1998 Joint Position Paper on Rural Obstetrics released by the Society of Rural Physicians of Canada, the College of Family Physicians of Canada, and the Society of Obstetricians and Gynaecologists of Canada. As this position paper states: "Risk can never be completely avoided. As long as communities include women of childbearing age, obstetrical risk will exist. Although some risk can be anticipated, a substantial portion of adverse outcomes is unexpected" (Iglesias et al. 1998: 78).

Ideally, risk management is a continuous process which integrates identification and analysis of risks and benefits throughout a pregnancy, labour and delivery. Such integrated risk management obviously extends beyond the local family physician as "the success of any perinatal regionalization program depends, in major part, on the cooperation and good will of all members of the health care team throughout the geographic area served"(Peddle et al. 1983: 175). The British Columbia Reproductive Care Program (2000: 3) established guidelines.

> Each community, including regional planners and the local perinatal team, must determine its own capabilities and the limitations of the local maternity services. This includes deciding which specific cases (including both maternal and newborn care) are appropriate to be undertaken in the community; all decisions should reflect evidence of best practice.

As discussed in Chapter 2, risk-scoring indexes and risk assessment tools have several shortcomings including limited assessment of psychosocial factors, questionable generalizability to rural populations and very poor specificity. Consequently, rural hospitals and regionalized systems of care must be prepared to care for the sick newborn before and during transport to an appropriate facility (LeFevre et al. 1989: 694).

Critical to local rural care providers' risk assessments are the proximity and transportation characteristics between a local rural community and specialized obstetric services (e.g., Caesarean section capabilities). As Hein explained at the outset of his 1980 study: "Time/ distance factors are an important consideration in planning a [rural] perinatal care system" (p. 541). Various recommendations have emerged regarding travel times to obstetric services. For example, Lalonde (1998) advised that any woman should be less than one hour's transportation away from anaesthesia, transfusion services, capability to perform

emergency Caesarean section, vacuum and forceps extraction, manual removal of the placenta and suction curettage. However, as Lynch et al. (unpublished) observed: "For many rural communities, such recommendations are unrealistic, and only serve to hasten the demise of small isolated maternity services." According to the 1998 Joint Position Paper on Rural Maternity Care, local care providers were aware that transportation obstacles may lead to more cautious risk management strategies (Iglesias et al. 1998). More precise information regarding how geography, in terms of remoteness and travel distances, affects rural maternity care practices is not found in the existing literature.

Who Provides Safe Rural Maternity Care?

The health human resource differences and disparities between rural and urban settings feature prominently in discussions and studies of the safety of rural maternity care services. Generally, family physicians are the lead care providers available in rural health centres, rather than obstetricians (Rourke et al. 2000; Stretch and Knight 2002). The overall number of rural physicians providing obstetric services has continued to decline in the past 10 years, which has compounded the problems with maintaining small maternity care services in rural communities (CIHI 2004). Rural settings have also presented particular challenges to the recruitment and retention of midwives in Canadian provinces that have regulated the midwifery profession.

Systemic issues have influenced the decline of interest in rural maternity care provision. As Wiegers (2003) observed in a comparative study of maternity care providers in Canada, the United States, Australia, New Zealand and Northern Europe, there has been a common trend among industrialized countries toward the "medicalization" of childbirth and a shift from general practitioners or family physicians delivering babies to specialist obstetricians as the providers of maternity care services. The general trend of obstetrician-based maternity care has not, however, held true for rural Canada where local access to obstetricians is restricted, because of the huge distances that separate some rural communities from larger centres. A 1995-96 study of rural maternity care services showed that 89 percent of all rural deliveries were attended by family physicians (Iglesias et al. 1999). Furthermore, the College of Family Physicians of Canada, the Society of Rural Physicians of Canada, and the Society of Obstetricians and Gynaecologists of Canada acknowledged in a 1999 position paper: "Most rural communities are too small and remote to sustain specialist obstetrical and anaesthetic services for operative birth" (Iglesias and Hutten-Czapski 1999: 209). As Iglesias et al. (1999) noted in their survey of rural Canada's distribution of family physicians and specialist surgeons, even in rural areas, differences in geographic isolation and population density matter. For example, Ontario has a significant number of communities with populations between 15,000 and 25,000 which can support one or more specialist surgeons. In the West and British Columbia, however, outside of the very large regional centres, most communities range in population from 5,000 to 15,000 and are usually too small for a successful specialty practice (Iglesias et al. 1999). Lack of local availability of obstetric specialists has been an issue of concern for health care providers, planners and researchers, as reflected in a 1995 editorial in the *Canadian Family Physician* that states: "Small-hospital obstetrics is in jeopardy because specialist support is unavailable and family practice obstetricians are reducing in numbers" (Chance 1995: 548).

Assessing whether family physicians are capable of providing safe rural maternity care has been a question consistently posed in the medical research literature. Searching for evidence to support or refute whether immediate access to perinatal sub-specialists on site is superior to delayed access to perinatal sub-specialists at a distant site, U.S. researchers evaluated 863 pregnancies cared for by family physicians across a range of service levels. Their findings led them to conclude that on-site perinatal specialists and technology are not necessary and that "board-certified family physicians provide quality obstetric care that is essentially equivalent regardless of site of prenatal or intrapartum care and regardless of access to on-site perinatal subspecialists" (Chaska et al. 1988: 160). Canadian family medicine researchers (Klein 1986, 1987; Klein et al. 2002a,c) noted the differences between family physicians and obstetricians in their use of interventions (induced labour, Caesarean deliveries, use of forceps) and women's psychological/attitudinal experiences during family physician and obstetrician care to support the hypothesis that family physician care is uniquely beneficial for birthing women. "[M]any women wish to be looked after in the context of the entire family" which is the preoccupation of a family physician (Klein 1986: 534).

A unique challenge for physicians providing rural maternity care services is the maintenance of their skills and confidence given the small numbers of births they may experience. Addressing the issue of whether physician experience ensures safety, Rosenblatt et al. (1985: 430) found, in a study of all public maternity hospitals in New Zealand between 1978 and 1981, "no evidence for a minimum number of deliveries below which outcome suffers." Klein et al. compared birth outcomes for deliveries by family physicians with varied annual delivery levels (fewer than 12, between 12 and 24 and more than 25) and concluded that family physicians' delivery volumes were not associated with adverse outcomes for mothers or newborns. The recent joint policy statement, "Number of Births to Maintain Competence," elaborates that there are several important variables that affect a provider's competence:

- the stage of a provider's career and, hence, the value of accumulated experience;
- the shared experiences of members of a practice group;
- well-developed collegial relationships among family physicians, specialists and sub-specialists;
- practice setting and organization; and
- the use of risk management or quality assurance programs (Society of Rural Physicians et al. 2002).

Similar to the rural maternity care research literature's postulations on local care providers' risk assessment role, it seems qualitative characteristics are more relevant in establishing safe obstetrical practices than arbitrarily set quantitative standards. Further exacerbating the problems rural women face in accessing rural maternity care services is the clear decline in the number of family physicians providing obstetrics in rural Canada. Canadian records show a steady decline in the proportion of family physicians attending births from 68 percent in 1984-85, to 46 percent in 1988 and 19 percent in 1997-98 (Reid et al. 2002; Wiegers 2003). Family physicians serving rural populations are still more likely to attend

births than their urban counterparts. According to *Giving Birth in Canada*, 27 percent of rural physicians reported delivering babies in 2001, compared with 12 percent of physicians in urban areas (CIHI 2004). As the President of the Society of Rural Physicians of Canada Peter Hutton-Czapski (1999: 72) described, these trends have significant implications for rural Canada.

> In urban centres this loss can be mitigated by having obstetricians and other family doctors take over the case load. In all of Canada's rural areas there are only 38 obstetricians, so generalists are often the only providers of maternity care, including cesarean sections.… If a rural doctor opts out of obstetrics and there is no one else available to provide obstetrical care, then women are forced to travel, often while in labour, to other centres.

Both recruitment and retention of rural practitioners have been identified as serious dilemmas for rural communities. In a 2002 presentation to the Commission on the Future of Health Care in Canada, Hutton-Czapski reported that while 22 percent of the Canadian population is rural, only 10 percent of Canada's physicians live in rural regions. Elaborating on how this discrepancy will be addressed, Hutton-Czapski noted that only 10.8 percent of medical students are of rural origin, and only about half of these rural medical students will choose careers in rural medicine, while only one in twenty urban students do so. Studies regarding retention of rural physicians highlight high turnover rates. For example, a survey of physicians in B.C. communities that qualified for the Northern and Isolation Allowance (NIA) found that between 1998 and 1999 there was an average turnover rate of 23 percent and only three physicians relocated to other NIA communities while all others left for an urban centre, the United States or another country (Larsen Soles 2001). Among the threats presented by such fluctuating trends in the availability of rural physicians is the vulnerability of rural maternity care services.

Shortages in family physicians providing local maternity care services for uncomplicated births as well as specialists required for emergency obstetrics in rural areas has contributed to the decline of rural maternity care services in Canada. Rourke's comparison (1998) of obstetric services provided in small Ontario hospitals in 1995 with those provided in 1988 documents trends that include fewer specialist general surgeons on staff, significantly fewer family physicians attending births, and significant declines in the availability of general and epidural anaesthetics and Caesarean section deliveries. Overall, fewer births occurred at Ontario's small obstetric services in 1995 than in 1988 (despite a provincial increase in total births) leading Rourke (1998: 2123) to speculate: "The result of reduced anesthesia, epidural and cesarean birth availability is reduced local ability to treat complications of labour. This likely results in more maternal transfers; more stress; and less satisfaction for patients, local family physicians, and obstetric staff."

Similarly, Hutton-Czapski's comparative study of northern Ontario rural maternity care services between 1981 and 1997 linked declining numbers of physicians providing maternity care with a significant decrease in the number of community hospitals offering obstetrical care between 1981 and 1997 (from 52 to 40 hospitals). These studies mirror trends in the rural United States where there are well-documented trends of shortages in obstetrical

providers leading to reductions in the availability of prenatal and obstetrical care (Rosenblatt and Wright 1987; Rosenblatt and Detering 1988; Larimore and Davis 1995).

Nursing trends also show discrepancies between rural and urban Canada although not as pronounced as those of rural physicians. A 2000 report showed that 17.9 percent of the registered nurses (RNs) employed in nursing in Canada worked in rural areas and while the absolute number of RNs in rural Canada had only marginally decreased since 1994 (by 1.9 percent), the absolute number of Canadians living in rural and remote communities increased over this same period (CIHI 2000). Similar to trends in the rural availability of specialist surgeons, lower ratios of RNs to populations of 10,000 in rural areas are experienced in western Canada than eastern Canada (CIHI 2000). Interestingly, rural RNs have been found to have lower levels of formal education than their urban counterparts which stands in apparent contradiction with the expanded role of practice demanded of RNs working in rural settings (CIHI 2000).

A poignant question has been asked regarding obstetrics in rural Canada: "What are we to do about obstetrical emergencies if we don't do obstetrics" (Younger-Lewis 1988: 1024)? The understanding that rural women will continue to have babies and some rural women will have emergencies during their pregnancies fuels a foundational argument in favour of maintaining rural maternity care services (Iglesias et al. 1998).

Newborn Outcomes for Rural Populations

Infant mortality prevention, especially in the neonatal period, is now widely understood by medical researchers to be a problem of ensuring that high-risk infants, particularly low birth weight infants, have timely access to a technologically sophisticated neonatal intensive care unit and preventing low birth weight and premature outcomes in the first place (Fisher et al. 1986; Hogg and Calonge 1988; Larson et al.1997). Living in a rural community is related to both of these issues. Geographic and seasonal weather conditions can influence access to, and increase the risk of, emergency transport, which is essential for systems of regionalized perinatal care (Rosenblatt et al. 1985; Fisher et al. 1986; Hogg and Calonge 1988; Larson et al. 1997; Yeast et al. 1998). Second, and very important, when local access to maternity services declines or is no longer available at all, studies have shown increased perinatal mortality and increases in admission rates to intensive care nurseries (Nesbitt et al. 1990, 1997; Larson et al.1992, 1997; Rock and Straub 1994; Larimore and Davis 1995).

The priority of minimizing infant mortality rates requires preventing preterm birth as much as possible. Preterm birth refers to a live birth of an infant with a gestational age at birth of less than 37 completed weeks. As Health Canada's 2003 *Canadian Perinatal Health Report* describes:

> Preterm birth is the single most important cause of perinatal mortality and morbidity in industrialized countries: 60% to 80% of deaths of infants without congenital anomalies are related to preterm birth. Preterm birth is also associated with cerebral palsy and other long-term health sequelae. One to two percent of all infants are delivered before 32 weeks of gestation, and

they account for nearly 50% of all long-term neurological morbidity and
about 60% of perinatal mortality. Even mild and moderate preterm birth puts
infants at increased risk of death during infancy (p. 73).

The Canadian Perinatal Surveillance System lists recognized risk factors for preterm
deliveries to include genital tract infection, cigarette smoking, pre-eclampsia, incompetent
cervix, prior preterm birth and abruptio placentae as well as psychological factors, such as
stress, anxiety and depression (McLaughlin et al. 1999). Lack of local access to maternity
care services can increase stress and anxiety for rural women.

Infants weighing less than 2,500 grams (5.5 pounds) at birth are considered low birth
weight, and low birth weight is clearly related to prematurity (Nault 1997). Low birth weight
babies are at a much greater risk of death, disease and disability. This can include cerebral
palsy, learning disabilities, visual problems and respiratory problems that may remain with
low birth weight children the rest of their lives. Factors that contribute to low birth weight
are complex and can include broad determinants of health, such as maternal age, multiple
births, socio-economic status, social support, as well as nutrition, work, personal habits,
such as smoking, alcohol and drug use, and access to health services.

Rural residence has been linked to inadequate prenatal care (Nesbitt et al. 1990; Larson et al.
1992, 1997; Rock and Straub 1994) As Larson et al.'s study (1997: 186) of 11.06 million
births (excluding twins and higher multiple births) in the United States between 1985 and
1987 found, non-metropolitan residents in a majority of U.S. states "were at significantly
greater risk than urban residents of delaying prenatal care until the third trimester." Common
hypotheses for different and less healthy prenatal behaviour and care among rural women
include lack of access to maternity care services, distance to maternity care services, and
slightly higher average parity compared to urban women (Hogg and Lemelin 1986; Hogg
and Calonge 1988; Nesbitt 1996; Larson et al. 1997). Without access to prenatal care, rural
women may be at increased risk as the importance of certain healthy behaviours during
pregnancy may not be fully understood, and medical risks or problems may advance
undetected. As Nesbitt (1996) postulated in a discussion of rural maternity care access
issues, it is important for local rural maternity units to serve as portals for rural women into
a regionalized system of care. The Joint Position Paper on Rural Obstetrics published by the
Society of Rural Physicians of Canada, the College of Family Physicians of Canada, and the
Society of Obstetricians and Gynaecologists of Canada warned: "Lack of local maternity
services leads to potential isolation and compromise for women who do not have the
financial means to travel to other communities to seek routine antenatal and intrapartum
care" (Iglesias et al. 1998: 77).

The Effects on Perinatal Outcomes of Not Providing Local Maternity Services

Small rural maternity care services are closing across Canada. The effects of these
closures are not yet known, but it is assumed women will access care in referral hospitals
with increased resources including operative delivery, access to specialists and a full array
of diagnostic technology, and that they and their newborns will be better off and safer.

There is evidence that this will not be the case. Larimore and Davis (1995) showed that in rural Florida counties there was a negative correlation between availability of maternity care services and infant mortality (R = -0.42, p = 0.012). They went on to model mathematically the likely effect of losing one family physician providing maternity care and found that it would increase infant mortality at the county level by 2.3 percent, and the loss of one obstetrician would increase infant mortality by 9.6 percent. Nesbitt et al. (1990) looked at counties in rural Washington state from which more that two thirds of women left to birth in other communities and showed that this high outflow was associated with a greater proportion of complicated deliveries, higher rates of prematurity and higher costs of neonatal care than low outflow communities.

Other studies explored the potential effects of tertiary obstetric care environments on women and their infants who experience uncomplicated pregnancy, labour and delivery, and suggest that increased interventions will take place (Klein 1986; Chaska et al. 1988; Goodman et al. 2002). Rosenblatt and Wright (1987) went so far as to suggest that small rural maternity care facilities offer specific advantages that may contribute to *better* outcomes and experiences of childbirth, as well as more cost-efficient care services, than larger obstetric centres. Recently, Canadian researchers have theorized that local maternity care may indeed be regarded as a "lynchpin" for sustainable medical, social and economic conditions for rural women and their communities (Klein et al. 2002a). Together, this small but growing body of research has provided a foundational base for thinking of rural community-based maternity care services as perhaps an efficient and appropriate health service delivery model for rural parturient women.

Among the speculated negative consequences of losing local maternity care services are the potentially harmful stressors associated with pregnant women travelling for perinatal care, including labour and delivery. A small study that compared the pregnancy and birthing experiences of Aboriginal women from two Canadian central arctic communities discussed the prevalence of emotional, physical and economic stressors. "For those women who delivered away from home labour was a traumatic event intensified by feelings of isolation and worry about their families" (Chamberlain and Barclay 2000: 121). Other medical researchers hypothesized about increased stress levels associated with travel and waiting to birth in unfamiliar settings (Rourke 1998) and, as Nesbitt et al. (1990: 817) cautioned, such experiences "may interfere with the normal process of labor."

Noting that "tertiary care environments produce tertiary style care, and the technological imperative is hard to resist" (Klein 1986: 538), health service researchers have questioned the value and unintended consequences of such kinds of care for women who do not require technological interventions in childbirth. Undermining claims that all childbirth should occur in specialized obstetrical centres are studies comparing outcomes between such tertiary settings and small rural centres. In Viisainen et al.'s study (1994: 404) of all women who gave birth in Finland between 1987-88, the authors concluded that "'safety' cannot be used as a basis for centralising birth care in large level 3 facilities" since in a regionalized system, small local units have survival and morbidity rates equal to areas served by large university hospitals. Similarly, a study of the 1995 U.S. national birth cohort (3,892,208 newborns) posited:

>[I]nfants might be harmed by the availability of higher levels of resources. In
>regions with a great supply of beds and neonatologists, infants with less
>serious illness might be more likely to be admitted to a neonatal intensive
>care unit and might be subjected to more intensive diagnostic and therapeutic
>measures, with the attendant risks of errors and iatrogenic complications, as
>well as impaired family-infant bonding (Goodman et al. 2002: 1541-1543).

Smaller studies including those by Peddle et al. (1983), Black and Fyfe (1984), Rosenblatt et al. (1985), Chaska et al. (1988) and Nesbitt et al. (1990) also presented results that indicate mothers and normal birth weight babies in small rural hospitals have equal and often better perinatal mortality rates than normal birth weight babies in Level II and III hospitals. Indeed, these researchers agreed that "the quality of care may be better in some respects in small hospitals [because of their] comfortable, low-technology environments" (Rosenblatt et al. 1985: 431), the non-interventionist and continuous care style of family practitioners, the extra time nurses in small hospitals may have to provide labour support and the freedom of movement allowed at small hospitals which may support spontaneous uncomplicated vaginal delivery (Hogg and Lemelin 1986; Klein 1986; Nesbitt et al. 1990). However, such claims are contested by other medical research including a study that compared neonatal mortality rates for all births in all centres in Norway between 1967 and 1996 (1.7 million births), which found that large units are beneficial for all infants including those of normal birth weight (Moster et al. 2001). Researchers found that over the 30-year span, the risk of neonatal death for term infants was 1.4 times (95 percent CI 1.1 - 1.7) higher in the smallest hospitals (less than 100 births annually) compared to hospitals of over 3,000 births annually. Another recent study from Hessen (Heller 2002), a relatively densely populated province of Germany, has also raised concerns about the safety of smaller hospitals. Heller (2002) carried out a hospital-based study and found that from 1990 to 1999 neonatal deaths in small delivery units (less than 500 births) were 3.5 times more likely than in delivery units with more than 1,500 births annually. Heller suggested that these results argued strongly for the consolidation of birthing services into larger facilities. There are significant challenges to generalizing the results of either of these studies to rural Canada.

Often embedded in comparative studies of obstetrical technological interventions among service levels are comparisons of costs. One 1988 study in Minnesota showed about a 12 percent reduction in the average cost of maternity care between urban, hospital-based tertiary obstetric centres and small rural maternity units (Chaska et al. 1988). Nesbitt et al.'s (1990) study of birth outcomes for rural women in Washington State in 1986 found that infants from "high outflow" communities had hospital charges twice as high as infants from low and medium outflow communities. Several health service researchers have begun to point out the deficiencies of existing cost analyses that ignore the downloading of costs to patients and communities. "In the economic analysis not only the direct costs of care but also the expenses (monetary and other costs) to the family should be considered. The care should not only be safe and economical but also convenient for the family" (Viisainen et al. 1994: 404).

What Is Missing from Rural Maternity Care Research?

Rural maternity care researchers are only beginning to probe the various meanings of the closures of small community obstetrics. In addition to continuing assessments of the safety of various levels of rural maternity care service delivery models, a growing number of Canadian health researchers are calling for increased attention to the implications of rural maternity care service policy and practice for rural women and their infants and families, rural maternity care providers as well as rural communities (Hogg and Lemelin 1986; Grzybowski et al. 1991; Rourke 1998; Hutten-Czapski 1999; Benoit et al. 2002; Klein et al. 2002a,b; Sutherns and Bourgeault 2003). In a 2002 article from British Columbia, researchers noted, "there appear to be few reports indicating what rural women actually have to say about the maternity care services they receive" (Benoit et al. 2002: 376). This observation echoes those emanating from other researchers who have observed the lack of qualitative data regarding rural maternity care services. "So far the preferences of families have been poorly examined and seldom implemented into birth care policy" (Viisainen et al. 1994: 404; see also Lambrew and Ricketts 1993). An important caution stands. "We should be careful not to dismiss [pregnant women's] judgments too quickly" (Hogg and Lemelin 1986: 2137).

A recommended step forward in ensuring the relevance of rural maternity care research to health services policy and practice comes from Lambrew and Ricketts (1993: 832). "By considering obstetrical access as a community and public issue, policymakers and researcher might develop approaches that can effectively ensure that rural and other underserved women have access to adequate obstetrical care." Many researchers have concluded that community-level variables that influence the viability of local rural maternity care services, including the decision making of women and their families, specific barriers for maternity care services, the practices of local care providers, and the ways in which local birthing is valued or not (Hogg and Lemelin 1986; Bronstein and Morrisey 1991; Lambrew and Ricketts 1993; Hutten-Czapski 1999). A current study of the availability of birth information and options in rural Alberta and Ontario described "the need not only to address the social and structural barriers to maternity health care information and options, but also to do so in ways that are strategically tailored to the realities of living in rural Canada" (Sutherns and Bourgeault 2003: 3). Provocatively, recent Canadian publications reflect family medicine researchers' anxieties about a "cascade of unforeseen dangers" that may occur when local obstetric units close (Klein et al. 2002a). Certainly, the lack of understanding of how health services policies and the restructuring of maternity care services delivery models impact rural women's experiences and birth outcomes requires further investigation.

Summary

Since the 1970s, various health services researchers across Canada, the United States, Australia, New Zealand, Finland and other industrialized countries have contributed to the evidence base related to the safety and efficacy of regionized perinatal health care systems and small rural obstetric units. This body of literature provides a foundation for thinking of rural community-based maternity care services as an efficient and appropriate health service

delivery model for rural parturient women; however, other recent studies from Norway and Germany contest claims that small delivery units are as safe as larger hospitals. This review of the literature finds many other unanswered questions pertaining to the safety and efficacy of both the provision and lack of rural maternity care services. While it is apparent that challenges for sustaining small rural maternity care services abound, the consequences of losing such services are not understood. Further investigation is required to better understand the full range of consequences of changing policies and delivery models for rural maternity care.

4. CLOSER TO HOME AND FARTHER FROM CARE?
RURAL MATERNITY CARE SERVICES IN BRITISH COLUMBIA

The British Columbia Royal Commission on Health Care and Costs,[4] chaired by Justice Peter Seaton, argued in its final report, *Closer to Home*, that "[m]edically necessary services must be provided in, or as near to, the patient's place of residence as is consistent with quality and cost-effective health care" (B.C. Royal Commission on Health Care and Costs 1991: A-6). Yet while "closer to home" became the rhetorical clarion call for a series of dramatic changes in the organization of health care in British Columbia throughout the 1990s, it is questionable whether citizens of rural regions of the province found care closer to home in 2004 than they did a decade ago. Indeed, as this study suggests, for some forms of care, including maternity care services, many rural women now travel further for services than previously, leading many people to wonder, as journalist Lynn Haley (1999) has, whether regionalization meant "closer to home or farther from care?"

This chapter briefly outlines the patterns of reorganization in the management and organization of health services in British Columbia from 1990 through 2003 as they set the context for birthing women and their families. The regionalization of health services and the devolution of decision making to health authorities is described and linked to underlying policy directions of successive governments. A review of policy documents covering the past decade provides little evidence of specific planning for maternity care services in general, and for rural maternity care services in particular. This lack of direct policy attention to rural maternity care means much of the decision making with respect to rural maternity care has occurred in an ad hoc manner in response to a local or regional sense of crisis. Thus, while there has not necessarily been an active dismantling of rural maternity services, there has been a de facto policy direction toward decreased access to services in cases of normal low-risk birth.

Methods

Policy documents and reports from 1991 through 2003 were reviewed. These materials were selected according to their perceived influence on the structure of British Columbia's health care system and their potential implications for rural maternity care. Only policy documents that followed and built upon *Closer to Home: The Report of the British Columbia Royal Commission on Health Care and Costs* were analyzed. We imposed this limitation, because the influence of *Closer to Home* continued through this series of policy documents and influenced the health care system's present structure. (See Appendix C for a list of key documents and an overview of their recommendations.)

Literature searches were also conducted using major indexes and databases including the Social Science Citation Index, Elsevier Science, Blackwell Synergy, OVID, PubMed and Academic Search Premier. Literature searches used combinations of the keywords rural, maternity, obstetrics, health reform and regionalization. Articles were selected that focussed on regionalization policies, or the management and delivery of health care services in a regionalized health system and/or addressed rural maternity care in some capacity related

to obstetrical services delivery in a rural setting, health care provider supply, experiences of rural birthing women and outcomes of rural births.

Following the Royal Commission initiated under the Social Credit Government in 1990 but which reported to a newly elected New Democratic Party (NDP) regime in 1991, major reforms to health care took place in British Columbia. It is evident that the NDP Government's initial regionalization policies were closely based on the Commission's report. The BC Liberal Government, elected in 2001, responded to the policies of the NDP and outlined in its various policy statements in the ensuing years. We recognize that many of the BC Liberal Government's initiatives are therefore still in progress.

It may be argued that it is premature to analyze the current government's health care reform policies as the final versions and outcomes of many of these policies remain to be determined. As a result, we are confined to analyzing the policies' objectives, observing the outcomes since their development, and making inferences with respect to their future results. Yet it is apparent that, even at this early stage, distinct trends and organizational structures have been significant for rural maternity care in British Columbia.

Health Reform in Canada

Despite regional and provincial variations, consistent trends have been observed in health care reform in Canada in the past decade and a half, notably the adoption of a business and managerial approach to decision making based on accountability frameworks and "evidence" in a context of tight fiscal management (Armstrong 2002). Other key contextual dimensions of contemporary health policy include a demographically changing health care work force, continuing intragovernmental struggles over jurisdiction in health and health care, rapid growth in the use of pharmaceuticals and advanced diagnostic technologies, continuing growth in demands for services, an aging population, recognition of the limits of health services to foster, maintain and improve health, and challenges to the *Canada Health Act* and its enforcement (Romanow 2002).

Regionalization
With the notable exception of Ontario, most jurisdictions in Canada have also undergone a process of regionalization in which previously centralized planning and administration of health care services have been devolved to varying types of authorities. The rationale for this devolution has mixed enhanced local accountability and responsiveness with cost containment and increased rationalization of services (McNamara-Paetz 1996).

Church and Barker (1998) defined regionalization as the creation of a new organizational structure that involves the introduction of an additional layer of governance that assumes responsibility for devolved functions. Typically, programs that were formerly directed by a single body are decentralized as they are taken over by new, regionally defined governing bodies.

Regionalization in the Canadian context has typically involved transferring a measure of authority from a ministry of health to a local governing authority. The area administered by this governing authority is usually determined by factors including geography, population

distribution and patient flows. Seemingly paradoxical, centralization forces may also come into play. As administration is devolved, some services may be reorganized in a way that concentrates them in particular areas of the region. Planning and administrative efforts are applied to areas larger than individual communities. Increased sharing of resources may happen across communities. These elements of regionalization have been fairly consistent in the Canadian context; Lomas et al. (1997) observed variations among the provinces with respect to the nature and extent of local health authority responsibility.

Regionalization in British Columbia

In British Columbia, regionalization has been an extended process, beginning in the early 1990s and continuing through the early years of the 21st century.[5] The process has been dynamic, with successive governments modifying the structures and organizational arrangements proposed and established by themselves as well as by their predecessors. Thus while there has been agreement about the overall direction — devolution to regional authorities — the details have varied with successive governments. While it is not possible to document here all the nuances of the regionalization processes that occurred in the past 15 years, it is nevertheless possible to see distinctions between the directions of the NDP Government and its successor, the B.C. Liberal Government elected in the spring of 2001.

British Columbia Royal Commission on Health Care and Costs
Regionalization was, in part, initiated by the British Columbia Royal Commission on Health Care and Costs. In its report, the Commission argued that the health care system in the province was disorganized and suffered from a lack of short- and long-term planning. It was suggested that previous reforms had been ad hoc, failing to address more than immediate concerns. It was argued that policy makers were alienated from patients and citizens' experiences, and there were few mechanisms for accountability, rendering performance assessments difficult. The commissioners argued that many of these problems could be ameliorated by its central recommendation: the creation of a health care system that provided access to services wherever possible within recipients' communities or "closer to home."

The rationale for this recommendation was based on two assumptions: patients' health conditions would not be exacerbated by a need to travel when they are able to access appropriate services in a proximal location, and decentralized services could be attuned to communities' unique needs. Health care resources would be directed to regions according to where they would be most productive. The Commission envisaged creating "several regional authorities" (B.C. Royal Commission on Health Care and Costs 1991: B-37) responsible for overseeing health care matters unique to the area. The Commission aimed to simplify the system by amalgamating existing health boards. Only issues that affected the entire province would be addressed at the Ministry of Health level. Rather, the Ministry would provide guidance and support, and allocate resources among the regions. These initial directions for the regionalization process shaped subsequent developments.

Davidson (1999) described the evolution of health reform in British Columbia under the NDP regime, arguing that the original policy response to the Royal Commission was

distinctive in that it embraced democratic participation as critical to local decision making and framed the goal of health reform as being to improve the health of the people of British Columbia by facilitating their increased control over their health, echoing the World Health Organization definition of health promotion. Over time, Davidson argued, this policy direction and the means of achieving it, underwent significant redirection — directions extended and reinforced, we would argue — by the subsequent B.C. Liberal Government.

From Devolution to Delegation
During the early 1990s, the NDP Government embraced the concept of decentralization, and rapidly put many of the Seaton Commission's recommendations into action. However, the process of regionalization assumed two distinct forms throughout the NDP's two terms in office.

The NDP articulated its original vision of regionalization in *New Directions for a Healthy British Columbia* (B.C. Ministry of Health and Ministry Responsible for Seniors 1993) with the creation of a system of 82 community health councils (CHCs) and 20 regional health boards (RHBs). The purpose of RHBs and CHCs was to ensure that health services were provided in a manner fitting to the area in terms of both demographics and geography. The Government planned to examine how to improve efficiency in locations of care, and make changes to budgets if appropriate. It also sought to examine hospital usage to uncover potential areas for waste reduction, and to explore alternative care options.

This vision was not enacted but rather replaced by a subsequent policy statement, *Better Teamwork, Better Care* (B.C. Ministry of Health and Ministry Responsible for Seniors 1995). This model called for 34 CHCs, 11 RHBs and a new structure, community health services societies (7), for a total of 52 health authorities. Appointments to the RHBs and CHCs began in November 1996 but the health authorities took varying lengths of time to become operational.

In 2001, the newly elected BC Liberals reorganized the system once again arguing that the previous system had been excessively bureaucratic and lacked an accountability framework. Described in *A New Era for Patient-Centred Health Care* (BC Ministry of Health Planning 2001), the B.C. Liberals introduced a system of five geographically based health authorities, the Provincial Health Services Authority (PHSA) and the Nisga'a Health Authority.[6]

The two government regimes differed not only in terms of the number of health authorities they saw as key to achieving their goals, but with respect to the goals of regionalization. Whereas efficiency and effectiveness were important to both regimes, the NDP saw these as outcomes of the system while the B.C. Liberals identified efficiency and accountability as goals. Moreover, as Davidson (1999) argued, the mandate of the health authorities shifted from one of meeting local needs to foster heath and well-being to meeting provincially imposed standards in a decentralized structure. These fundamental differences in policy orientation and mechanisms of accountability are important generally and with respect to rural maternity care.

From Improving Health Outcomes to Improving Public Access to Health Care Services
The Seaton Commission argued that the ultimate focus of decentralization efforts should be improving the overall health of British Columbians. Although it failed to define "health," Davidson (1999: S35) argued that the intention of the policy direction was clear: "to devolve substantial power over health services to citizens at the community level, not only to counter the power of the health professional elites, but also to foster a community orientation to wellness." In time, this population health approach disappeared, to be replaced by what Davidson described as a concern with improving public access to conventional health care services. This orientation arose, in part, from public demand for access to services, as well as the challenges of operationalizing a population health approach in a health care system dominated by acute health care.

James (1999) has queried whether some governments use the rhetoric of population health as a means of shifting the location of care away from institutions to the community, thus making it easier to remove or relocate services as part of the regionalization process. In her study of health reform in Saskatchewan, James argued that embracing a population health approach to health policy may have provided an effective rationale for reducing health care funding to institutions and reducing expenditures overall. Lomas (2001: 356) concurred, stating that "many regional health boards have proved useful to provincial governments as both foot soldiers of downsizing and local agents of change."

From Political to Managerial Accountability
The vision of the Seaton Commission included enhanced public participation in health system decision making, a vision developed in response to a perception that previous decision making had been dominated by particular interests and/or groups (including health care providers and local political interests). Public participation was embraced as a mechanism to increase local responsiveness and understanding of the health care system.

Several studies have concluded that participation in local planning is a positive experience for health board members as it enables them to give back to their communities, to become involved in meaningful civic duties and to influence policies and standards (Frankish et al. 1999; Veenstra and Lomas 1999). Church and Barker (1998) argued that it remains questionable, whether communities spread out over considerable distances are able to communicate and share interests to the extent required by a regionalized health care system.

Community involvement in health care administration begs the question of which community members are directly involved and whom they represent. According to Veenstra and Lomas (1999), it is possible for interests to be compromised by class divisions and other markers that may separate an individual from others in the community. They argued that whether these divisions can be overcome depends on the community's characteristics. Frankish et al. (2002) explained that some board members believe that they represent others with similar physical and socio-economic characteristics as them. Other board members represent individuals who share their interests. These different approaches to representation can be a source of tension on health boards.

In British Columbia, the original vision of accountability suggested by the initial regionalization efforts was one of greater accountability to local and regional priorities through the mechanism of public elections to health boards. Accountability was framed as not only accountability to government but also to local citizens. During implementation, however, the NDP shifted from elected to appointed boards and councils.

Davidson (1999), reflecting on community participation in health boards in British Columbia, described numerous challenges to this original vision, including fears that particular political interests might dominate health boards due to low voter turnout, the tendency of the public to equate health with health care, resulting in greater pressure to expand access to health services, and public concerns over waiting lists. As Lewis et al. (2001: 342) pointed out, "formal democratization in itself does not guarantee interest." Without widespread participation, it is potentially easier for particular interest groups to assume power and push through distinctive agendas that are not representative of the general population's wishes for its health care system.

Davidson argued that the shift from elected to appointed boards and councils in British Columbia meant that authority was no longer devolved but rather was delegated by the provincial government through the appointment process. This, in turn, shifted accountability from a political frame to a managerial frame, an approach that was maintained when the B.C. Liberals reformed the health authorities. Appointees to the governing structures of the B.C. Liberal era were more likely than their predecessors to be drawn from business and professional ranks than previously, increasing the perception that fiscal and managerial accountability were their key mandates.

These changes — regionalization itself, in combination with the specifics of the regionalization process — have been dramatic in British Columbia. They have also had different implications for the urban and rural areas of the province.

Regionalization and Rural Communities

The Royal Commission (1991) specifically commented on issues of rural health care. *Closer to Home* identified an insufficient supply of health care providers, inappropriate emergency services and the costs incurred by patients forced to travel for treatment as major challenges in accessing care for rural residents. The report also argued that transferring patients from their home communities to other centres for treatment was difficult and sub-optimal. While the Commission felt it was inevitable that a portion of British Columbia's rural and remote patients would continue to need to travel for treatment, *Closer to Home* argued that a decentralized health care system would better respond to many health needs within rural and remote communities.

There is little consensus on whether these reforms ameliorated or detracted from accessibility to rural health services generally and rural maternity care in particular. While successive governments have maintained that their regionalization policies are well suited to addressing the challenges of providing health care to rural communities in a fiscally responsible and pragmatically feasible manner, some analysts suggest otherwise.

For example, Church and Barker (1998) noted the challenge of reconciling regionalization and its intended outcomes with geography. They suggested that Canada's geography makes it difficult to achieve the economies of scale that make regionalization a functional model for more densely populated jurisdictions. Economies of scale are more realistically achievable when a population is numerous and geographically condensed, such as in some European countries. Canada's dispersed, extensively rural population poses challenges to this particular dimension of regionalization. The authors noted that "all in all, regional populations in Canada might be too small to achieve any real economies of scale or to more generally effect a coordination of health services" (Church and Barker 1998: 474). Geography also poses problems in relation to physician supply (and the availability of formal and informal health care providers generally), workload and skills.

Rural Physicians
Delivering health care services closer to patients' residences is significantly challenged by an absence of an appropriate number of physicians and other health care providers. *Closer to Home* was careful to point out that a shortage of rural and remote physicians did not translate into a province-wide shortage of physicians. In essence, the Commission argued that the health care provider issue was not one of numbers but of distribution. As a result it fell to health policy reforms to devise a workable model for regionalization and ensure a proper number of health care providers are available to carry it out.

In the early stages of its regionalization process, the NDP Government took notice of the physician distribution issue, and concluded that the preferred approach to addressing the problem should be largely independent of the regionalization process. This Government appeared to take the position that the complexity of regulating the locations of health care providers required carefully developed policies that addressed the problem, yet allowed for a considerable degree of autonomy. As a result, the NDP Government's attempt to reconcile its regionalization policy with physician numbers centred on recruitment and retention.

The NDP approach to recruitment and retention focussed on compensation, recognizing that the Ministry of Health's fee-for-service (FFS) billing system discouraged some physicians from practising in rural and remote communities, because the patient base is smaller in these areas. Thus the number of billings made by a rural physician, in an unadjusted FFS system, would typically be less than an urban colleague. Without adjustment of compensation rates, some communities would be too small to make family practice financially feasible for a physician. The NDP Government committed to continuing the Northern Isolation Allowance policy that had been in place for over a decade. This program gave additional funding to physicians based on a point value determined by their community's degree of remoteness. Hence, physicians practising in the most remote regions would receive the greatest amount of extra remuneration. Travel-related expenses later supplemented remuneration as part of the 1998 Physician Outreach Program.

The controversial Physician Supply Measures, adopted in 1996, were designed to improve the geographic distribution of British Columbia's physicians by allowing new graduates of medical schools to more quickly receive greater percentages of their billings if they practised in rural and remote locales, generally areas with fewer physicians. This policy was

successfully challenged in court under the *Canada Health Act* for permitting unreasonable compensation for medical services, and under the *Canadian Charter of Rights and Freedoms* for infringing on physicians' mobility rights.

The B.C. Liberal Government also sought to address physician recruitment and retention, but decided to incorporate policy measures into its overall vision for regionalization. The NDP Government, in contrast, had largely treated decentralization of health services and physician recruitment and retention as distinctive issues. The B.C. Liberal Government adopted a more interrelated approach to health care reform in both of these areas as it saw physician recruitment and retention to be an integral part of its own vision for decentralization. The B.C. Liberal Government held the view that with new funding arrangements, such as the opportunity to offer salaries, health authorities would have greater capacity to design packages aimed at attracting physicians to rural and remote areas.

The B.C. Liberal Government also saw compensation as a primary factor in recruiting and retaining rural physicians. Like the NDP Government, it took into account several of the holistic factors identified by the 1998 *Dobbin Report*. The B.C. Liberal Government did, however, make its own modifications to the compensation scheme. *Rural Programs 02/04: A Guide for Rural Physician Programs in British Columbia* (B.C. Joint Standing Committee 2002) documented measures both planned and already in place to address the issue of physician distribution in rural areas of British Columbia. Collectively, these programs comprise key aspects of what the B.C. Liberal Government labelled its Rural Health Initiative. Programs within this initiative are oriented around two main themes: physician supply and rural medical education. Both themes place heavy emphasis on physician compensation measures. To further facilitate its model of regionalization in light of physician supply challenges, the B.C. Liberal Government implemented its Rural Retention Policy Framework for Health Authorities in 2002. The essence of this policy is a financial incentive program to attract physicians to rural and remote communities, and encourage them to stay for a lengthy period of time (B.C. Joint Standing Committee 2002).

Workload of Rural Physicians
The *Dobbin Report* (Dobbin 1998), commissioned by the NDP Government, argued that providing 24-hour coverage was a key problem for rural physicians' workloads. While accessing services closer to home may be beneficial to patients, smaller hospitals with few doctors to call upon face challenges in offering around-the-clock services. As noted in Chapter 3, more on-call shifts can impose enormous burdens on rural and remote physicians and have been documented as influencing physicians' choices about whether to offer obstetric services. The *Dobbin Report* posited that collaboration among colleagues positively impacts physicians' experiences as they have access to more support, a collegial atmosphere and fewer on-call duties.

The Report noted that rural obstetrics was an area in which greater collaboration should be implemented to reduce burdensome workloads. The Report argued that a patient's general practitioner should not be obliged to deliver a child if not on call and the on-call physician practices obstetrics. Hence the *Dobbin Report*, while advocating better compensation for

rural physicians, appears to establish the foundation for an argument in favour of regional hospitals concentrating acute care services.

The NDP Government demonstrated some effort to address the concerns raised around rural physicians' workload by developing the *Northern and Rural Locum Program* in 1998, thus taking steps to make it easier for rural and remote physicians to receive time away. This Government did not implement the integration recommended by the *Dobbin Report*, although a version of this recommendation would come later under the B.C. Liberal Government, which adopted the notion of critical mass theory to understand the issue of physician workload. *Standards of Accessibility* engaged critical mass theory to show that a community needs more than one physician to provide the services that need to be available at all times (B.C. Ministry of Health Services and Health Planning 2002). As a result, recruitment and retention must be strong enough to build a group of physicians capable of sharing responsibilities. This prevents exhaustion of physicians, and enables required services to be constantly available. *Standards of Accessibility* stated that the number of providers in the group would vary according to location. Small communities experience difficulty in achieving critical mass.

In *Enhancing Health Services in Remote and Rural Communities*, the B.C. Liberal Ministry of Health Planning (2002a) articulated support for taking an alternative approach to the delivery of primary health care services in rural areas. Engaging critical mass theory, physicians were encouraged to practise in groups. These groups should be multidisciplinary so patients could access a variety of primary care and specialty services in the same location. Groups of providers could be organized to suit the health needs of individual communities. This policy was intended to improve patients' ability to access comprehensive health care services easily on a 24-hour basis. Thus, issues surrounding the workload of rural physicians appear to resonate with the version of regionalization implemented by the B.C. Liberal Government. Concentrating physician services in regional hospitals accessed simultaneously by a number of rural communities alleviates strain on physicians practising in relative isolation in smaller hospitals. Yet organizing access to physicians in this manner places the tenets of closer to home in jeopardy. An alternative approach is for rural general practitioners to adopt an expanded skill set (including anaesthesiology and surgery) to better meet the needs of their constituents.

Other Health Care Providers: Nurses, Midwives, Doulas
Although one rationale for the regulation and public funding of midwifery in British Columbia was increased access, to date rural parturient women have not, for the most part, benefited from regulated midwifery. No midwives were practising in the research sites for this study, which is a consistent representation of the situation across most rural communities in British Columbia. Aside from the basic issues around supply, this is a structural issue: legislative deterrents including current fee-for-service models of remuneration that make practice in low-volume environments challenging, active practice requirements for both home and hospital birth and the need for access to specialists for discussion, consultation and transfer. Challenges facing rural nurses revolve around their currency of obstetrical skills in light of low volume, staffing arrangements in many community hospitals that do not allow for maternity designations but require all nurses to work as general ward nurses, and difficulty

in securing continuing medical education when it occurs outside the community due to the difficulty of securing replacements when they leave the community for any length of time. Doulas, trained in supporting a woman through labour and birth, are emerging as a complementary profession in many rural communities, with potential to augment formal care provider teams. It has been suggested that the only way to meet the challenges of providing care for birthing women in the coming years will be through interdisciplinary care teams of professionals working together in a collaborative manner (Kornelsen 2003).

Travel Time

The time it takes for patients to receive treatment was a significant consideration of regionalization policy and the closer to home concept in general. Yet the capacity of regionalization to decrease travel times is highly related to the presence of physicians in rural and remote areas of British Columbia. The NDP Government demonstrated recognition of this interface, and attempted measures to distribute physicians in the province so emergency and non-emergency health services would be accessible within a reasonable distance and at all times. Yet awareness was growing that issues around physician distribution and health care reforms centred on regionalization needed to complement each other if rural and remote communities were to be properly serviced within reasonable time frames.

Ensuring appropriate travel times for rural and remote patients proved to be challenging, as crucial factors varied across regions. The NDP Government's health reform policy was committed to the Seaton Commission's recommendation that primary care services should be easily accessible closer to home. Yet this government stated in *Strategic Directions*, that standards of timeliness would not be universal due to an inadequate supply of providers for rural and remote areas (B.C. Ministry of Health and Ministry Responsible for Seniors 1999). The government's approach became improving accessibility by determining what health services are in the middle ground, or available to each person within a determined travel time. *Strategic Directions* did not specify precisely what services would be included in this category. To ensure the availability of the middle ground services, the Ministry intended to monitor the number of practitioners, and ensure that practitioners were distributed geographically on an equitable basis using the recruitment and retention programs discussed above.

The B.C. Liberal Government took a different approach by maintaining that when demographics are taken into account, the utilization of the health care system can be roughly determined and resources for acute care allocated accordingly. *Standards of Accessibility* outlined the appropriate time frames for treatment within regions (B.C. Ministry of Health Services and Health Planning 2002). Different standards apply to the three main categories of acute care services: emergency, acute inpatient and specialty services. According to guidelines, 98 percent of individuals within a health authority should be able to access emergency services within one hour of travel time (based on *aerial* distance), 98 percent of the region's population should be able to access acute inpatient services (including low risk obstetrics) within two hours of travel time and specialty services, including obstetrics and gynaecology, should be available within four hours of travel time for 98 percent of the region's population. Developing access guidelines based on air travel time, however, needs to be revisited. The B.C. Liberal Government's strategies to achieve these targets are consistent with their version of

decentralization which includes rationalizing and reorganizing hospital treatment, implementing a needs-based formula to guide funding allocations, and charging the PHSA with reducing the disparities encountered by British Columbians when accessing health services.

Maintaining Practitioners' Skills in the Face of Low Volume

There is a perception that the smaller patient base in rural communities may lead to a lack of skills among practitioners with respect to handling certain kinds of health problems. Though, as noted in Chapter 3, Klein et al. (2002d) found no evidence to support this perception with regards to maternity care. Both NDP and B.C. Liberal policies, however, perpetuated this perception of challenges physicians practising in rural and remote communities may face in maintaining their skill sets if opportunities to use them do not regularly arise. Rural and remote communities struggle from the outset to attract and retain an appropriate number of physicians; this is compounded by policies which reinforce this, to date, unsubstantiated perception which may influence physicians to refrain from particular procedures, because they feel they do not use them frequently enough to remain competent.

In *Strategic Directions for British Columbia's Health Care System*, the NDP Ministry of Health continued to support the recommendation of the *Closer to Home* report that primary care services should be easily accessible in a proximal distance to an individual's residence (B.C. Ministry of Health and Ministry Responsible for Seniors 1999). Yet the Ministry of Health asserted that achieving *Closer to Home*'s central recommendation would remain difficult, because specialized services require equipment and physicians that regularly perform these procedures.

The perceived issue of professional competence — maintaining a skill set through repetition — influenced the B.C. Liberal Government's health reform efforts, as highlighted in *Standards of Accessibility*. This policy linked professional competence to the patients first model of providing acute care services. Professional competence mandates that providers need to be trained to deal with acute care situations, and they should regularly encounter these situations in order to maintain their skills. The necessity of regular practice increases with the complexity of the service. Hence, providers of specialty services should be frequently exposed to cases. Low incidences within these populations, due to their numbers, make specialty services difficult to provide in a proximal location. *Standards of Accessibility* reflected a belief that availability of providers is not the sole issue facing health care in rural and remote regions and that acquiring and retaining providers that exhibit a satisfactory level of professional competence can create a particular problem for rural and remote populations. This was their argument in favour of channelling patients to regional hospitals where physicians are exposed to volumes they believe are sufficient to maintain professional competence and can be derived from *Standards of Accessibility*.

Access to Rural Maternity Care

Supplying labour and delivery services in rural areas has been consistently problematic, as previously noted, in part because it is difficult for rural communities to attract and retain physicians willing to offer obstetrical services. Yet the current state of rural labour and delivery services cannot be solely attributed to patterns of physician distribution. Labour

and delivery services in rural areas have been sensitive to changes in the organization and delivery of health care. As the NDP and B.C. Liberal governments approached health care reform in contrasting ways, the provision of labour and delivery services to rural women was different under each government.

At the onset of the restructuring process, *Closer to Home* identified that between 25 and 42 percent of rural and remote obstetrical cases were sent to urban centres (British Columbia Royal Commission 1991). The Commission argued that this trend should be reversed: more rural and remote women should give birth in their own communities. The report also argued that hospitalization, emotional and financial stress, family instability and marital instability during pregnancy increase the risk of low birth weight. Policy makers were encouraged by the Commission to be cognizant of these factors, and to take a comprehensive approach to reproductive health in their policy measures. Yet over a decade later, and after multiple restructuring endeavours, increasing numbers of birthing women are required to leave their communities to give birth, increasing the number of so-called "outflow" communities in British Columbia. Ironically, rural maternity care services were one of the few that were deemed likely to benefit from the introduction of regionalization by the Seaton Commission report.

Under the NDP Government, *New Directions* created multiple jurisdictions focussed on providing services in individual communities (BC Ministry of Health and Ministry Responsible for Seniors 1993). These policies aimed to create a wide range of services at the local level, ranging from primary care to acute and long-term care. This regionalization model encouraged proximate communities to work together to provide a comprehensive range of services. The B.C. Liberal Government assumed a more macroscopic approach to regionalization, combining the small community-based units created under the NDP Government into large regions, several of which encompass large portions of landmass.

There is a connection between the regionalization models adopted by governments and the ongoing growth of outflow communities. The closer to home philosophy of the Seaton Commission was with policies that maternity care services for low-risk women be available in the community. Under the *New Directions* (B.C. Ministry of Health and Ministry Responsible for Seniors 1993) and *Better Teamwork, Better Care* (B.C. Ministry of Health and Ministry Responsible for Seniors 1995) approaches, expectant mothers would not need to travel beyond a nearby community to deliver their babies and receive care throughout the birthing process. Even in rural and remote areas, *New Directions* maintained that a considerable range of services should be available within a CHC or RHB. Only identifiable high-risk cases would require transportation out of the region to a major care centre. Yet these policies did not successfully curtail the outflow of expectant mothers from rural and remote communities.

Alterations to the locations of maternity care services occurred alongside changes to regionalization under the B.C. Liberal Government. The model of regionalization introduced by *A New Era Update* (B.C. Ministry of Health Services 2002, 2003) and *The Picture of Health* (B.C. Ministry of Health Planning 2002b), key health policy documents of the B.C. Liberals, altered the plan for maternity care services developed by the NDP Government.

As discussed above, the B.C. Liberal Government's approach to regionalization combined 52 CHCs and RHBs into five regional health authorities, plus one provincial health authority (retaining the Nisga'a Health Authority as a separate, seventh entity in the province). Whereas many rural communities had previously offered a range of health care services, including acute care in small local hospitals, the new policies mandated that many acute care services should be centralized in large, regional hospitals. Specialists and surgeons began to provide all their services out of the regional hospital. Health care in many rural and remote communities became increasingly limited to primary care and some diagnostic services.

The re-regionalization processes of the early 21st century reform may not have dramatically affected patients accessing maternity care services in urban areas but in rural and remote areas, most maternity care services became concentrated in regional hospitals. Transportation by ambulance continued to be available for women in labour yet travel times could be lengthy, and the terrain difficult to travel. Provisions for a supporting individual to accompany a woman in labour were not apparent in the policies. Together, these factors contributed to the increase in outflow communities.

Structural changes that result in decreased labour and delivery services in rural hospitals create challenges for local birthing in addition to travel. Concentrating obstetricians in regional hospitals may render general practitioners hesitant to attend even low-risk deliveries in an isolated setting without readily accessible backup support. Planning to deliver within the community may become difficult, even impossible, as a result. Midwives remain valuable, but midwifery services in rural communities are also vulnerable to shifting labour and delivery services to regional centres.

Standards of Accessibility conveyed the B.C. Liberal Government's recognition that maternity care services in rural areas of the province could likely be impacted by regionalization-based health care reforms (BC Ministry of Health Services and Health Planning 2002). The policy suggested expanding the function of general practitioners to make more services, including obstetric surgery, available. General practitioners could receive more training than normally required so they are in a position to respond to surgical cases, such as Caesarean sections. This would render a community more self-sufficient and less reliant on sending patients to larger centres for treatment. The need for specialists could be minimized. Yet *Standards of Accessibility* relies on a community's capacity to attract an adequate number of physicians. As discussed above, recruiting and retaining physicians for rural communities is challenging. Furthermore, there is no guarantee these physicians will be willing to offer labour and delivery services. Even if the Ministry of Health and the regional health authority are willing to support labour and delivery services in rural communities, a willing and capable physician remains a necessity.

Summary

In a 2002 report on health care accessibility standards, the B.C. Ministry of Health Services and Health Planning noted an absence of guidelines for the planning and management of rural obstetrics services. Moreover, there is only limited knowledge of the consequences of the cessation of local obstetrics services on birth outcomes, health teams and neighbouring

health centres, and communities (Thommasen et al. 2000). Currently, despite the gaps in knowledge, decisions are being made to close local maternity services in response to fiscal constraints and care providers' preferences and fears. The B.C. Reproductive Care Program reports that 13 B.C. hospitals serving mainly rural populations ceased maternity care services between January 1, 2000 and May 1, 2002. This situation stands in stark contrast to the national policy statement on rural maternity care: "Whenever feasible (a woman) should give birth in her own community" (Thommasen et al. 2001). Maternity care providers and policy makers agree that health human resource issues are at the heart of determining the feasibility of sustainable local rural maternity care services (Klein et al. 2001).

Changing organizational structures, planning priorities and processes, fiscal constraint and the changing roles and responsibilities of service providers and decision makers arising from regionalization have produced a complex environment for women, their families and those who care for them during the perinatal process. The vision of closer to home has not become a reality; for rural maternity care, access is uneven and unstable, dependent on the vagaries of individual providers and local authorities. Indeed, people in search of care may now find themselves farther from care, as a result of the centralization and clustering processes undertaken to rationalize services in many communities.

The B.C. Liberal Government articulated its commitment to providing quality and timely health care services, but argued that this must occur within a framework of reasonable limits according to what is realistic and affordable. In *A Picture of Health* (B.C. Ministry of Health Planning 2002b: 8), they introduced the notion that centralization would facilitate efficiency and resource sharing, arguing that "clustering acute care services in regional hubs leads to improved retention of health care staff, better access to quality services for patients and better patient outcomes." However, while the report acknowledged that clustering services might have implications for health care providers (some might have to relocate), it did not discuss the implications for patients, including birthing women and their families.

As noted, political accountability has been reduced over time in the mandates of health authorities and the mechanisms of accountability, decreasing the participation of local citizens in decisions affecting them. However, reasonable in the face of the threats of capture by limited interests, the reduction in public participation limits the opportunities for citizens to voice concerns over the direction and nature of changes in their communities.

It is in this context of ongoing change, a focus on performance and managerial accountability and declining availability of key health care providers, that women and service providers were asked to reflect on their experiences of rural maternity care and its impact on their lives and work.

5. METHODOLOGY AND METHODS

Medicine has long been recognized as both an art and a science. Successful practice relies on the integration of perspectives and content from diverse disciplines as well as strong communication and interpersonal skills. In medical practice, the interplay between knowledge from the natural sciences, social sciences and humanities is complex. The research and research methodology supporting evidence that informs or enlightens medical practice, therefore, needs to be as diverse as the requisite knowledge. This may be particularly true when investigating the implications of the erosion of rural maternity care services in British Columbia as the process is a product of multiple, complex, interrelated influences that have occurred over time leading to physiological, psychological, social and spiritual consequences for birthing women, their families and communities. The effects on care providers must also be recognized. Consequently, an effective research strategy demands building on the current epidemiological evidence (see Chapter 3) by including research into social dimensions of care. This may be accomplished efficaciously through a qualitative approach.

In his recent book, Flyvbjerg (2001) identified three kinds of knowledge: *techne* (technical knowledge or know-how), *episteme* (analytical, scientific knowledge) and *phronesis* (judgments and decisions considering context and values). While decisions made during the course of a pregnancy, labour and delivery rely heavily on technical and scientific knowledge, they also involve judgments of value and are highly dependent on the situation or context in which the pregnancy and birth occur. This research focusses on better understanding the obstetrical experiences of rural women and the relationship of these experiences to decisions made and actions taken by administrators and care providers. For this reason, we have chosen qualitative research methodologies that are appropriate to explore these kinds of questions (Pope and Mays 1996; Flyvbjerg 2001). Specifically, we choose to use a qualitative, community-based methodological framework utilizing focus groups and semi-structured interviews. In this chapter we outline the justification for using focus groups and semi-structured interviews, describe the sampling and research methods we employed, including a discussion of the criteria used to select and recruit the communities and the participants (women, care providers, local leaders and administrators) and end with descriptions of the data collection settings.

Community-Based Research, Focus Groups and Semi-Structured Interviews

We chose to use a qualitative, community-based methodological framework to investigate the impact health care reform including reduced public expenditures and reduced hospitalization and institutional care has had on parturient women living in rural communities in British Columbia visà-vis their experience of birth. Community-based research is "scientific inquiry involving human subjects that takes place in the community — that is, outside of the laboratory, hospital, or clinic setting" (Blumenthal and Yancey 2004: 3). It is based on the recognition that the development of authentic relationships with communities "enhances relevance and validity of health research by ensuring that the social, cultural and economic conditions of the community are included" (Macaulay et al. 1998). Community-based research also includes principles that govern relationships between

researchers and communities, and prepares researchers to create the community partnerships needed to conduct responsible research (Blumenthal and Yancey 2004).

Qualitative community-based inquiries seek to develop a complex and holistic understanding from the perspective of the study participants. Rather than assuming objectivity, qualitative researchers are more likely to admit they bring personal values and scientific interests into the research. They are aware of their values and acknowledge that reality is subjective. By collecting data in the natural setting, the distance between the researcher and the study participant is reduced. The use of open-ended questions is an indication of the role of the study participant as the expert. The nature of the interaction is collaborative and comparable to a dialogue. Power and control are shared (Sterk and Elifson 2004: 134).

Two primary modes of qualitative data collection are focus groups and unstructured interviews (Fontana and Frey 2000; Kitzinger 1996), both of which are

> centred around a series of open-ended questions or a list of topics to be discussed. The order in which topics are addressed is irrelevant and not all topics may be raised with each respondent. Unstructured interviewing requires the interviewer to have a plan about the general topics to be discussed, but the conversation — the data-gathering process — determines how and when the information is obtained (Sterk and Elifson 2004: 137).

Unstructured interviewing allows for the collection of a breadth of data that neither quantitative methods nor more structured forms of qualitative interviews permit (Britten 1996; Fontana and Frey 2000). In addition, unstructured interviews provide a forum for participants who may not feel comfortable in (for a variety of reasons) or who are unable to participate in focus groups to contribute their experiences to the research process.

Through the group process that occurs in focus groups, participants are able to "explore and clarify their views in ways that would be less easily accessible in a one to one interview" (Kitzinger 1996: 37; see also Krueger 1994). These methods are often used to examine participants' experiences of health services, such as maternity care, and are very useful when the purpose of the research is to improve service delivery (Kitzinger 1996). They were, therefore, particularly appropriate given the goals of our research.

Current theories on qualitative methodology encourage the use of multiple methods to help capture the complexity of humans' interaction with each other and the systems around them. (Fontana and Frey 2000; Flyvbjerg 2001). Traditionally, in qualitative research studies, researchers strived for triangulation (different methods being used to find similar results) (Richardson 2000). In 1978, Denzin outlined four basic kinds of triangulation of which one was methodological triangulation or using multiple methods to study a single problem in order to increase the reliability of the findings. Recent theoretical developments, however, encourage researchers to use the concept of crystallization instead of triangulation (Janesick 2000). Crystallization acknowledges that the issues qualitative researchers investigate are complex and constantly changing.

> Crystals grow, change, alter, but are not amorphous. Crystals are prisms that reflect externalities *and* refract within themselves, creating different colors, patterns and arrays, casting off in different directions. What we see depends upon our angle of repose (Richardson 2000: 934).

Multiple methods examining the same issue, therefore, give us a more complete picture of the experiences of rural women with maternity care.

Current Research: Approach and Methods

Criteria for Selection of Study Sites
Our research was undertaken in North Island,[7] Alert Bay, Sparwood and Haida Gwaii, to explore rural women's experiences of maternity care in British Columbia. These four towns were chosen based on the following characteristics:

- designation of "high outflow" (more than two thirds of women from the community give birth in a location outside their community) based on B.C. linked data, which includes hospital discharge data;

- size of the community including geographic boundaries, catchment area for health care services and population;

- distance to hospital with Caesarean section capability and distance to secondary hospital;

- usual conditions of road and air access in winter months; and

- diversity of cultural and ethnic sub-populations within communities.

During our time in each of the four study sites, we compiled resources that helped us generate community profiles. As we were implementing a community-based method in our field-work approach, learning as much as we could about the history, geography, dominant employment base, health care facilities, and current issues and challenges sparking local debate and interest helped us contextualize the experiences of women in the communities. (See Appendix B for community profiles.) Resources we accessed in each study site included museums, local libraries, tourist information centres, local health centres and local Aboriginal and First Nations band council offices. In addition, we conducted informal interviews with long-time residents. Before entering each community, we also generated statistical profiles using Statistics Canada data, B.C. Stats data, and B.C. Reproductive Care Program data to increase our general understanding of the area. (See Appendix D for a summary of these profiles.)

Criteria for Selecting Study Participants
Our original recruitment strategy was to collect primary data directly, through interviews and focus groups, from the following populations:

- women who had given birth, without significant complications, in the past 18 to 24 months and whose primary residence during this time was in one of the rural communities selected for this study;

- health care providers living in or providing maternity care to rural populations in our chosen towns;

- local leaders living in and involved with decision making around the provision of local and regional maternity care services; and

- administrators of local hospitals and health care centres who were involved with managing the ways in which maternity care services were provided locally, and decision making around issues of local and regional maternity care provision.

The purpose for excluding women who had experienced significant complications during their pregnancy was to acknowledge that such complications would warrant evacuation from any rural community. As these women would require specialist/obstetrician attention, which could only be found in a larger referral centre, our original thought was to exclude such stories from our research. Once field work/data collection began, however, we quickly realized that excluding women who had experienced significant complications during their pregnancy leading up to birth was unrealistic for three reasons.

- In conducting our first set of interviews we realized that women who had experienced complications in their pregnancies were endemic to our study sites. Part of the story of women's experiences of being pregnant in a rural or small town seemed grounded in the diverse stories of risk that were shared in the context of each interview. Excluding such experiences would potentially eradicate the true experiences of pregnancy and birth as told by rural women.

- Interviewing women about birth stories placed our research team in the position where we became safe venues for women to unload and debrief about their experiences. Given the small pool of professionals who live and work in rural areas, and the difficulties with anonymity and confidentiality often experienced by women when accessing professionals, many women expressed appreciation to our research team for giving them the opportunity to share their birth experiences. Particularly, women who had experienced complications in their pregnancy and delivery appreciated this element of our research. Although this was an unanticipated outcome of our recruitment strategy, we quickly realized that providing all women who had recently given birth with an opportunity to share their story, regardless of whether their experience had been free from or laden with complications, would be both advantageous to our research and therapeutic for the interview participants.

- Most of our initial recruitment of women participants was done through a third party. (See following section for more detail.) As such, women with experiences of higher risk pregnancies and deliveries were often recruited to our study to demonstrate examples of the difficulties women face when travel away from their home community to deliver is required or necessary.

Recruitment of Birthing Women
We used two approaches to recruit women[8] to participate in this study: third party recruitment through local maternity care providers and a snowball technique.[9] The choice we made about which approach to employ in each community was influenced by local circumstances.

Recruitment through Local Care Providers
Formal letters describing our objectives were sent to local physicians along with a poster advertising the dates we would be in town to interview. The poster listed a contact number potential participants could call. The poster noted that a $35 honorarium would be paid to help cover travel and personal expenses (see Appendix E). Physicians were asked to place the poster in a location in their waiting room or office that would attract the attention of women who met our inclusion criteria. We sent the letter and poster to physicians three weeks before we arrived in town to allow both physicians and women interested in participating sufficient time to commit. These letters were either preceded by or followed up with a phone call to answer any questions the care providers had about our research.

We also contacted other local care providers who interacted with women meeting our inclusion criteria. Examples of local care providers we approached for assistance with recruitment included public health nurses, doulas, La Leche League representatives, Head Start program leaders, prenatal educators, community health workers, and mother and infant group leaders. We sent individuals the same letter and poster given to physicians, but followed the letter up with a phone call to help solidify the recruitment process. These care providers were instrumental in assisting us in recruiting women. Their knowledge of local women who had recently given birth, in addition to the individual pregnancy, labour and delivery, and post-partum stories of each woman helped the recruitment process immensely. The time they had available to assist in recruiting also exceeded what physicians could offer. These care providers often surpassed our expectations by setting up interview times and locations with women interested in participating, offering space in their offices for interviewing and providing a social context of the local maternity care situation.

The Snowball Effect
As all four study sites were small, initial participants recruited through care providers or posters were often very connected with other local women who had, like themselves, delivered a baby recently. It was through the connections these women had with each other that we gained access to a broad range of study participants.

Achieving target numbers of participants was easily accomplished in each community.

Recruitment of Care Providers, Administrators and Local Leaders
When recruiting women to participate in our study, we contacted care providers, local leaders, and administrators by letter and by phone to see if they would help us in our recruitment efforts. During our phone calls with them, we asked them if they would be willing to participate in our research. (See Appendix F for a list of the roles of the care providers, local leaders and administrators we recruited.) Because the populations of the research towns are small, we were able to contact every care provider, administrator and local leader involved with maternity in all four locations.

Data Gathering: Approach and Rationale
At minimum, two researchers travelled to the four study sites to conduct the group and one-on-one interviews. The complete research team (four researchers) travelled to one of the study sites. Using two researchers when conducting group interviews contributed to both the rigour

with which the group interviews were conducted, and eased the facilitator's role in controlling group dynamics. Responsibilities of the group interview facilitator included keeping one person or a small coalition of persons from dominating the group, encouraging recalcitrant respondents to participate and obtaining responses from the entire group to ensure the fullest coverage of the topic. In addition, the facilitator had to "balance the directive, interviewer role with the role of moderator, which call[ed] for the management of the dynamics of the group being interviewed; the group interviewer [had to] simultaneously worry about the script [or probes] of questions and be sensitive to the evolving patterns of group interaction" (Fontana and Frey 2000: 652). The presence of a recorder enabled the facilitator to concentrate on her tasks, while the recorder took notes on the body language and facial expressions of the group, was responsible for managing the audio-taping equipment and recording notes on the content of the group discussion that were helpful when the audio quality of the recording was poor.

In instances where both principal investigators attended interviews, a dyadic approach was taken where each asked questions and followed up with probes. This approach was highly effective and led to a richness of data due to the complementary approach to the subject area the principal investigators' respective disciplines of clinical medicine and sociology afforded; the congruous communicative approaches undertaken by both researchers; and the collaborative, heterarchical ethos, based on respect and commitment to the research, that informed the approach to this study.

As all four study sites were in isolated remote locations, it was necessary for our research team to do a significant amount of travel on isolated roads to access our field sites. Having two people travel together not only provided company for the trip, but also served as a backup should something have gone wrong. In addition, conducting field work in rural and remote towns requires that researchers spend time away from home in the pursuit of data collection, which although extremely rewarding, is usually an intense exercise. By using the efforts of two individuals for the process, the workload was distributed and the chances of burnout were reduced.

Researching Women's Experiences of Maternity Care

We used group and one-on-one unstructured interviews to elicit the narratives of women's experiences of maternity care. The interviews were undertaken in the post-partum period after the course of care had been completed to allow for a reflective distance between participants and their experiences. Each participant signed a research consent form or gave oral consent after a verbal explanation of the research study if she had trouble reading the consent form (oral consent was recorded on audio cassette). All participants were given a $35 honorarium to help cover travel and personal expenses.[10]

The group interviews lasted approximately two hours and ranged in size between nine and fourteen participants; the one-on-one interviews ranged in duration from thirty to ninety minutes depending on the level of detail participants offered in telling their birth story. All group and one-on-one interviews with women were audio taped for transcription (See Table 1: Number of Group and One-on-One Interviews Conducted). The number of interviews conducted with women in the four study sites was ample to reach saturation. While at first glance the number of women participants involved in our research seems low, our interview

list was exhaustive of women who met the criteria of delivering a baby within the previous 18-24 months.

Table 1: Number of Group and One-on-One Interviews Conducted by Study Site

Participant / Study Site	Sparwood	Haida Gwaii	Alert Bay	North Island	Total
Women	Group: 8 One-on-One: 5	Group: 3 One-on-One: 9	Group: 14 One-on-One: 0	Group: 0 One-on-One: 6	45
Care providers	Group: 0 One-on-One: 5	Group:3 One-on-One: 8	Group: 2 One-on-One: 4	Group: 0 One-on-One: 5	27
Local leaders	Group: 0 One-on-One: 2	Group:0 One-on-One: 2	Group: 0 One-on-One: 0	Group: 0 One-on-One: 1	5
Administrators	Group: 0 One-on-One: 1	Group: 0 One-on-One: 2	Group: 0 One-on-One: 0	Group: 0 One-on-One: 0	3
TOTAL	21	19	20	12	

Benefits and Challenges to Methods Used to Research Women's Experiences

There were benefits and drawbacks to each data collection approach. The group interview approach involves "the simultaneous interviewing of individuals, whereby the emphasis is not on the individual responses but on the interaction between the participants" (Krueger 1994: 139). As the goal of a group interview is to focus on the synergistic group effect, this approach was beneficial for the women as they assisted each other with brainstorming the major issues for rural maternity care. Women enjoyed these group sessions as the experience often doubled as a social gathering and an opportunity to reflect on personal challenges encountered throughout their pregnancies, labour and delivery, and post-partum experiences. The data collected from these sessions helped us gain a good understanding of the macro-level issues experienced by women and their families.

There were, however, two main challenges to conducting group interviews in our project. First, when doing maternity care research with new mothers, it is likely that infants and children will accompany the participants to the interviews, despite the provision of funds for baby-sitting, which was the case in this project. The noise level created by the infants and toddlers often interfered with the quality of the audio recorders and made facilitating the group setting difficult. Beyond acoustic challenges, participants' attention would sometimes be diverted to attend to the needs of their children. Whenever possible, a member of our research team offered child-care services so mothers could concentrate on the interview; however, most participants declined this service being uncomfortable leaving their child(ren) with a stranger. Second, pregnancy, labour and delivery, and the post-partum period is experienced differently by all women. Although the group interview data were rich in the macro-level trends in how and in what ways women access maternity care services, it was often difficult to ignore the very different details of participants' experiences. Participants' socio-economic status and marital status, number of years spent living in the town, knowledge of local support networks, number of other children in their care, and personal philosophy of birthing all affected their views on birthing and accessing maternity care services.

The one-on-one interviews allowed the research team to probe more deeply into personal experiences. We were then able to use these details to frame further probes on their views of the current, and in some cases, recent past provision of local maternity care services. The data elicited from all one-on-one interviews were rich. While all participants seemed appreciative of the opportunity to share their stories, one drawback to the one-on-one interview approach was that participants missed out on the opportunity to gather socially in a group interview. Furthermore, one-on-one interviewing is more time consuming and labour intensive for the research team than group interviews.

Using group and one-on-one unstructured interviews to elicit the narratives of women's experience of maternity care allowed us to use trigger questions to begin participant's narrative of experiences of receiving maternity care in a rural environment. Through this method, participants were encouraged to articulate their story as it related to their experiences of care. Participants selected what information was revealed and what information was concealed based on their own criteria as opposed to theoretical categories for classification. Guides or probes were used to precipitate discussion among participants. (See Appendix G.) These guides or probes were based on existing literature of rural women's experiences of health care in general, literature on northern women's experiences of forced evacuation for birth, one principal investigator's understanding of the issues based on his experience as a rural physician providing obstetrical care and the second principal investigator's understanding of the literature pertaining to the psychosocial issues in childbirth. The probes fit into five broad themes: access to maternity care services, experiences of access, level of satisfaction with local maternity care, decision making, and economic and social costs associated with having to travel outside of their community for care.

Researching Care Providers, Local Leaders and Administrators
We used a semi-structured interview approach to elicit the perspectives of care providers, local leaders and administrators. This approach "follows a series of open-ended questions that often are asked in a particular order" (Krueger 1994: 137). When conducting semi-structured interviews, it is assumed that

> participants are knowledgeable, have a meaningful perspective to offer, and are able to make this explicit in their own words. Consequently, the nature of the interaction between the interviewer and study participant takes on a different meaning…[whereby t]he interviewer is an active participant and it is essential that rapport be established with the interviewee (Krueger 1994: 137).

With a semi-structured approach, all care providers and local leaders were asked the same questions in the same order. This contributed to ease of data coding and ensured all participants provided us with their views on similar subject matter. The open-ended nature of the questions gave participants the freedom to insert their personal views and experiences. The sharing of these views and experiences allowed us to gain a more comprehensive understanding of the emotional and political nature of rural maternity care provision, and the personal role the provider had in this provision.

The semi-structured interviews lasted between 20 and 90 minutes, depending on the level of involvement and knowledge each participant had of the local maternity care situation, and how much time each participant was willing to dedicate to the interview process. (See Table 1.) Each participant signed a research consent form before the interview. The research team intended to audio record all interviews for transcription; however, some participants refused audio taping. Reasons for refusing audio recording ranged from an individual's reluctance to have her voice audio taped (i.e., self-conscious about how her voice sounded on tape) to reluctance by participants to have their views recorded given the emotional and political nature of the topic. In these cases, a recorder took detailed written notes, while the interview was being conducted by a facilitator.

It was the goal of our research team to identify and request an interview from the complete list of maternity care providers, local leaders and administrators within each community to ensure that anyone involved in providing care to, or making decisions about, parturient women was included in our study. (See Appendix F for a list of the roles of the care providers, local leaders and administrators we recruited.) Identifying and interviewing all community care providers, local leaders, and administrators generated a rich data set and allowed us to better contextualize the local birthing environment in each study site.

We began our field research by distinguishing between care providers and local leaders. We acknowledged these roles as separate by constructing different questions within our semi-structured interview schedule. On starting our interviews with care providers and local leaders, we quickly learned that the roles of a provider and leader are often integrated in one person. Although, for the purposes of this report, we classify the care providers as having only one role, many care providers hold the dual responsibility of acting as a leader in their respective communities. Therefore, in the context of this study we interviewed a total of five local leaders in comparison to 27 care providers (see Table 1).

When doing research in small communities, it is imperative to find a balance between a rigorous, well-defined approach to data collection and being open to the vagaries of local circumstances, personalities and unanticipated events. Our flexibility reflected our commitment to community-based research. One challenge, we quickly learned, was the fact that all care providers and local leaders involved with maternity care in small towns are extremely busy. As the provision of maternity care is a responsibility that requires both on-call and after-hours work, dedicating 20 to 90 minutes to our research became, in some cases, a stressful and unrealistic demand. However, most care providers and local leaders gave their time willingly to our research, and provided us with their perspective in detail ensuring we understood the issues and the local political climate surrounding the topic of maternity care. For those who expressed concern over the time commitment involved, allowances were made to, for example, conduct group interviews or telephone interviews to facilitate their participation. We also undertook several interviews over meals. We believed the benefits of capturing the views of care providers, local leaders and administrators outweighed the potential costs of a lack of uniformity across all interviews.

The present nature of the political climate with regard to the provision of rural maternity care in British Columbia influenced the data we collected and challenged the participation rate of some

care providers, local leaders and administrators in our research. British Columbia is two years into a process of regionalization; thus, the way in which all health services are delivered in rural and small towns is undergoing significant change. For example, when the proposal for this research was written, all four of our study sites had local birthing capacity, despite their status as high outflow communities. Between the submission of our research proposal (December 2002) and the conduct of our field research (April to September 2003), three of the four study sites lost all capacity for local birthing. In two of our study sites, Alert Bay and the North Island, losing capacity for local birthing was also influenced by a high profile provincial government decision to impose a temporary moratorium on the provision of birthing services (all women had to leave the area for care). This decision differed from the need to withdraw services based on a regionalization strategy.

A semi-structured interview guide was developed for use with both care providers and administrators (see Appendix H) and another one for use with local leaders (see Appendix I). The care provider/administrator interview script was classified using seven main theoretical categories:

- provider role (education and training, current role as a provider in study site);

- provider experience (background);

- changes to local provision of maternity care;

- resources and support available locally, regionally and provincially for maternity care;

- safety and risks associated with providing local maternity services;

- perceived implications for women and their families accessing maternity care services out of their community; and

- ideal model of birthing in rural and remote British Columbia.

The local leader interview script was classified into three main theoretical categories:

- changes in the local provision of maternity care;

- perceptions of implications of these changes for birthing women and their families; and

- ideal model of how local maternity services should be provided.

Data Collection: Women
We conducted three group interviews (focus groups). Each took place in a multi-purpose space in public health offices, recreation centres, or Head Start family centres. These spaces were ideal for the women and their children to gather as they had chairs suitable for conducting the interview directly adjacent to safe play areas for infants and toddlers. The use of these spaces facilitated our research as the women did not have to worry about securing child care for their infants and toddlers, and they were familiar with the environment where the group interview was taking place. Despite the challenges posed for recording and for the facilitators as mentioned above, the safe play areas for children did enable the participants to focus on the interview, as they were not worried about where their children were or what they were doing. The group interview spaces also had kitchen facilities attached to them

which facilitated our preparation of healthy snacks and drinks suitable for participants and their children.

Although our research team appreciated how the group interview spaces facilitated the involvement of participants, the multi-purpose nature of the spaces was not ideal for interviewing. The children's play area made the environment very loud which, at times, interfered with the audio quality of our tape recording. Also, the general acoustics challenged our ability to hear participants, particularly in large group settings. Finally, there were few surfaces where audio recorders could be perched to capture the views and stories expressed by participants.

The one-on-one interviews were conducted in locations chosen by participants. These included participants' homes, local libraries, coffee shops, local restaurants, public health nurse offices, health centres, women's centres, women's transition houses, Head Start family centres, Aboriginal meeting centres and Family Place offices. Because participants chose the locations in which they were comfortable to conduct the interview, they were not concerned about the public nature of many of the interview settings. As our research team was well versed in the sensitive nature of conducting confidential interviews in public spaces, particularly in rural communities, every effort was made to ensure the women's choice of location for the interview would allow her to share her story openly and comfortably. As our research team conducted the field work with, at minimum, two members, we were not concerned with safety issues when conducting interviews in participants' homes.

Data Collection: Care Providers, Local Leaders and Administrators
Three group interviews were conducted with care providers. (See Table 1.) The group interviews were conducted in restaurants, as decided by the participants themselves. Due to the sensitive nature of our interview questions, great efforts were taken to ensure the comfort of the participants sharing their experiences in a public place. Conducting the interviews in restaurants allowed us to offer a meal to thank them for their participation and gave us access to care providers who would otherwise decline involvement due to a hectic schedule. Although the group interviews were conducted in public settings, there were few other customers in the restaurant, and participants did not seem disturbed about sharing their views in a public setting.

The remainder of the interviews with care providers, local leaders and administrators were one-on-one interviews in participants' homes, offices, coffee shops or restaurants, according to their personal choice. Again, as our field team consisted of at least two members, safety issues where not a concern. The public settings chosen by participants ended up being private as no other customers were present in the locations at the time the interviews were being conducted. The audio quality for most of these interviews was good.

Data Analysis: Narrative and Coherence
Analysis and interpretation of interview and focus group data were based on the recognition of responses as narrative accounts or stories. This premise relies on the assumption that telling stories is a significant way for individuals to construct and express meaning (Mishler 1986: 66). Rayfield (1972), an anthropologist, suggested that stories are

inherent to the way the human mind works and goes on to describe the story as a "natural psychological unit." Theories of coherence[11] were further used to guide the detailed analysis. A qualitative data analysis software program, QSR NU*DIST, was used to aid in the analysis of data, specifically in regards to coding (attaching key words or tags to segments of text to permit retrieval, storing the data, linking the data and providing written commentary on the process of collection and analysis).[12]

Summary

The exploratory, qualitative research method used in this investigation yielded results that were contextually grounded and descriptive to "maximize discovery and description." The rich, detailed description found in the spoken narratives of the women, care providers and administrators have allowed us to identify common themes among the respondents in a way that acknowledges the nuances unique to each participant within each community. Through interviewing much was revealed in the descriptions participants used, and recollections often evoked what Morse (1992) called an "emotional re-enactment" of events. These processes have been particularly advantageous given the goal of capturing experiences of rural maternity care.

6. RURAL CARE PROVIDERS, LOCAL LEADERS AND ADMINISTRATORS' EXPERIENCES OF OBSTETRICAL CARE

The physicians, nurses, informal care providers, administrators and local leaders we spoke with wove a story around maternity care in their respective communities that began with an awareness of the context of rural practice. Thematic to this awareness was an understanding of the difficulty practitioners have in maintaining their skills and abilities in light of the low volume of local deliveries in most small communities and the implications of this on sustainability. This awareness was underscored by the recognition that despite challenges, as long as families live in rural communities, women will get pregnant and birth will happen. Participants were forthcoming with their perceptions of the safety of maternity care in the absence of local Caesarean section capability and how this, along with other factors, influenced the sustainability of local maternity care services. Many participants had clear ideas about what was needed to maintain local birthing services, and although the specific criteria varied among practitioners, there was strong agreement about the notion of the importance of a collaborative decision-making process around community birth services. There was also recognition of the challenges to providing care in communities without immediate access to Caesarean section capabilities. Underscoring this was an awareness of the need to weigh, comprehensively, the risks and benefits to both staying and leaving the community. Many participants also had thoughts on the steps necessary to improve the maternity care environment in small, rural communities.

The Context of Rural Practice

Through their narratives, care providers presented a comprehensive picture of the realities they faced in rural communities, whether or not they offered maternity care services. These challenges started with the need to maintain their obstetrical skills, regardless of whether they had an active obstetrical practice due to the possibility of precipitous deliveries. Those with an active obstetrical practice recognized the implications of low volume. Administrators recognized the challenges of recruitment and retention. All recognized that birth would always happen as long as women become pregnant in rural communities.

Maintaining and Developing Competency in the Context of Decreasing Volume
As noted earlier, the birth rate in many rural communities in British Columbia is declining. This is compounded by the fact that many women in small communities leave to give birth in referral centres, both of which contribute to a low volume of local deliveries. Low volume of care has significant implications for care providers who must remain current in their skills, abilities and level of confidence through practice. It also has an impact on training new professionals — medical, nursing and allied — in rural obstetrics. The challenge of maintaining competency in the context of low volume was an underlying tension for many of the care providers we spoke with and a significant motivation to retire from obstetrics for those who had ceased providing care. As one nurse said:

> *This is the same for any rural nurse that's been in a rural area for any length*
> *of time: how difficult it is to maintain skills because you just don't see these*

*things on an ongoing basis but yet you have to be able to, and I mean at least
we didn't have to worry about maternity here but in [next community] the
nurses there had to have maternity skills and trauma and emergency and they
also had to be able to deal with a patient who had an MI and they also had to
be able to deal with the geriatric patient that might need acute care services
and so yeah…to me it's sort of an extra pressure* (Town 1 - 002 : 306 -- 319).

Some care providers, usually physicians, undertook work in high-volume maternity care
units during time away from practice in their home community to compensate for the low
levels of obstetrical cases they saw. This option, however, was not available to most nurses
who did not have the financial or professional resources to leave the community on a regular
basis for additional training.

Low-volume practice had further implications for care providers, particularly midwives,
who must meet minimum standards of active practice to maintain licensure (between 10
and 20 births per year depending on how long the midwife has been licensed)[13] (College
of Midwives of British Columbia 2003). This provided challenges to interprofessional
collaboration in communities not large enough to support more than one practitioner.

*Well, the concern is, is that there's not very many births on the island. Even
if 100 percent of the births [were] in the hospitals I think you're talking 60
births a year…. And some of those are just risk bound or they're Caesareans
or whatever they can't deliver on island. So you're, you're probably looking
at - and some would be medivaced as well — so say 60, 70 births. Even if you
said 100 babies were born here every year potentially you know you have six
doctors right 'cause you have three full-time equivalents in community A and
three full-time equivalents in community B. Well even 100 babies between six
practitioners isn't very many and the College of Midwifery requires that to
keep your ticket — at least when it was introduced — that a midwife had to
be the principal, the person catching the baby, for 20 deliveries a year…. I
think it's gone down now so that I mean I think there may be compromises
being worked out* (Town 2- 023 : 352 -- 374).

As discussed below, women from rural communities clearly articulated their desire for
a choice in caregiver, including the option of having local midwifery care. In many
communities there were informal care providers (such as doulas and La Leche League
leaders) and members of the community as well as formal care providers (such as obstetrical
nurses and Head Start co-ordinators) who expressed an interest in midwifery training. For
most, however, leaving the community for four years to undertake the training,[14] should they
be successful in their application to the highly competitive program, was an insurmountable
barrier which, when added to the low volume of care within the community, made the option
unattractive to most. One participant described the frustration that kept her from pursuing
midwifery training in spite of her commitment to the community and the profession.

*Oh I've considered it but I'd have to uproot my family for a long time. Up
until just recently everybody I'd talked to said there's no way you could ever*

practise here and I didn't want to leave here. So why would I uproot my family for however long it took to get certified and not be able to come back here? Because it wasn't enough volume to practise and we aren't supposed to practise without a partner so it's certainly not enough for two midwives, you know what I mean. Like we'd have to have two very part-time practices and do other things as well, but it's pretty hard to do that if you're doing that job. So it always seemed like it wasn't feasible and I really didn't; I wasn't willing to leave here. We worked really hard to get to this place and it was important to me to raise my family here (Town 2 - 018 : 423 -- 443).

The low volume of local deliveries also had an effect on other professions working to support maternity care. As one participant described, her goal of becoming a childbirth educator was stymied by the fact that she did not feel she could gain the required experience in her local setting.[15]

I wanted to become a childbirth educator but that's difficult, because I'd have to leave to get the amount of births in 'cause it takes forever and a day to get the births here (Town 2 - 017 : 372 -- 376).

Several communities were witness to the recent growth in the number of women interested in becoming doulas, trained professionals who give "emotional, physical and informational support to the woman who is expecting, in labor or has recently given birth. The doula's role is to help women have a safe, memorable and empowering birthing experience" (American Pregnancy Association 2004). In one community, a certification workshop was attended by over 20 participants, many of whom had a commitment to local birth and were interested in supporting women through labour and delivery. Meeting their practice requirements for certification by attending births, however, was again a challenge due to low volume.

Low Volume: Implications for Care

As noted above, the reduction of the number of births in local communities leads to less local services and more women leaving to have their birth elsewhere, which contributes to less local experience and services, and so the cycle of loss of local services gradually worsens. Other policies, which delimit criteria for local care, such as a "no primip policy,"[16] further reduce the number of local deliveries and contribute to practitioners' decreased sense of competency and comfort with providing local maternity care.

Twelve years ago or more they started with, you know, no primip births in [our community] so the birth rate[s]...were definitely going down, so yeah, their competency was going down and their comfort level being there at a birth, right. Because ultimately, the care of the mum and babe rests on the medical staff, right. So if they're not comfortable, because they're not the ones doing the births all the time or because they're just aren't too many births happening, yeah, their skills go down...then of course the doctors [are] unwilling (Town 4 - 001 : 604 -- 622).

The Challenge of Retention

Rural practice, as documented in other studies (Larimore and Davis 1995; Rourke 1998; Wiegers 2003), creates a unique set of challenges for physician retention. Difficulties with social integration into a small community, local political disputes related to health services, and the time demands of being one of only a few available (on-call) doctors are some of the issues that relate to the documented high turnover rates of doctors in rural communities. This had an impact on the other medical, nursing and allied health care professionals within our research communities, despite participants' understanding of the causes of such attrition.

> *Already the doctors were leaving. The doctors that we knew and loved so much. They were around that time they were all kinds of exodus out of here. Probably because of the conditions; the structure of the health care society was changing too and I think the conditions they were working under were unbearable. Just the way they were treated and the time they had to work. I don't know much about that. I'm sure you've heard something about it, and it hasn't been very livable for anybody that's why we've got such a turnover of doctors here. We end up with doctors who don't have a lot invested here and they come and go and there's no continuity. That's my biggest beef* (Town 2 - 018 : 180 -- 193).

Sometimes this stress and uncertainty leads to early retirement.

> *I set up my RRSP [Registered Retirement Savings Plan] for 60. But with all the political situation and all the hassles we've had to go through I don't know it may come down a little bit earlier* (Town 1 - 005 : 1018 -- 1021).

Births Will Always Happen

The care providers we spoke with consistently acknowledged that there will always be a need to maintain maternity care skills; even when maternity care is not an officially provided local service, births will still happen. This led many participants we spoke with to express their sense of being caught in a dilemma of uncertainty. Many did not want to offer obstetrical care as they felt it was unsafe, but in not offering care, their skills and experience would diminish leading to further anxiety when they needed to provide care in emergencies. As one provider said:

> *But I do have mixed feelings, because it is difficult to get them out. It is risky but yet, no, it happens and then if I don't do [obstetrics] here, there will be more woman who I know will deliberately stay in town until they get into labour anyway…and with the nurse not being exposed to it regularly and with somebody who just shows up out of the blue, they will be more, what do you say, less prepared for it* (Town 4 - 003 : 416 -- 423).

As intimated above and discussed in the following section, birth will still happen because women will show up in advanced labour, either by design or circumstance, leaving the health care team with little choice but to carry out the delivery. One participant noted this when he said:

> *Because there are people who just show up in labour. And even before that*
> *there are people who are high risk [and] are supposed to leave the island:*
> *they show up at the hospital in labour* (Town 4 - 003 : 429 -- 432).

Even when local care providers recognized the possibility of a woman remaining in the community to give birth despite recommendations to the contrary, short of extreme legal measures, there was very little they could do. One participant said:

> *As long as you have women of child-bearing age [here], you are potentially*
> *going to be having women having their babies here....I don't know how many*
> *doctors would be willing, to get a court order and force a woman to travel off*
> *island if she was refusing to do so* (Town 2 - 023 : 507 -- 514).

Sometimes, care providers were able to anticipate the possibility of an "unplanned" local birth, whereas in other instances women concealed not only their intention to have a local delivery (when it was planned) but also the very fact of their pregnancy.

> *You're always going to have somebody who's bound and determined to*
> *deliver here so they'll come in at the last moment…the doctor doesn't even*
> *know they're pregnant* (Town 3 - 002 : 296 -- 301).

There will also always be the potential for premature deliveries before the recommended evacuation date (usually 36 weeks gestation) as long as women in rural communities continue to get pregnant. The understanding that births will always happen was consistently prevalent among rural care providers.

Care Providers' Perceptions of the Safety of Local Maternity Care

Local care providers in this study were largely aware of the social stress a woman can experience when she is referred out of her community to give birth. The care providers' own anxieties, however, about possibly confronting a situation for which they are unprepared or ill-equipped often outweighed these concerns. As one physician described, the realities of geographical isolation and the related unreliability of emergency transportation gave the physician little flexibility in decision making.

> *I've got mixed feelings. I feel sorry for the woman who has to leave her*
> *family and her young ones and has to go down and stay for two weeks*
> *waiting for baby to be born. And I sympathize [with] the stress they are*
> *facing while they are waiting and, quite often, they do end up facing*
> *unnecessary stress, because they just want the baby out and be home. But*
> *yet we are so isolated and we have such terrible transportation and that if*
> *something does happen to a woman or baby we might not have enough time*
> *to get them out somewhere. So it's a risk that they have to take anyway. And*
> *I choose my patients carefully, but there are always unexpected situations*
> *anyways so it's a risk you take* (Town 4 - 003 : 244 -- 257).

Another physician reported serious misgivings about the safety of local maternity practice without Caesarean section capabilities and how this determines the referral strategy.

> *I don't like being in a spot where it isn't safe to practise and that's what I feel strongly about here with maternity. Is it safe to practise? It's fine [if] everything goes well.…Got a woman in labour…we have no provisions for Caesarean section.…To me, if a woman insists on it here I just think she's foolish. I know it's difficult to go away and wait…but what is more important than having a safe delivery [and] healthy baby?…I don't want to be in that position I don't want to see that happen* (Town 3 - 003: 14 -- 47).

Care providers with little experience providing maternity care, particularly in a rural setting, and those who had witnessed a colleague experience a bad obstetrical outcome in a rural setting, were more likely to deem rural maternity care unsafe. Concomitant to a discussion of the relative safety of local obstetrical care was an awareness of the legal and professional repercussions care providers could face in providing local birthing services. In a focus group discussion with local rural doctors, anxiety about being sued for malpractice surfaced.

> *Things could go wrong, and people more and more are being sued* (Town 2 - Doctors' focus group discussion : 375 -- 376).

In addition to the risks of facing legal action, care providers' were concerned about their professional reputations and licensing. Describing a particularly unsettling birthing experience, a nurse recalls the fear of losing her license to practise:

> *Interviewer (I): So how did you feel as this woman's going through the later stages of labour?*
> *Participant (P): I was panicking. I was so scared….*
> *I: What was going through your head?*
> *P: Well just thinking that if anything went wrong it would be my licence: not being qualified* (Town 3 - 001 : 64 -- 72).

Factors Influencing the Availability of Local Services

Care providers we spoke with had a clear understanding of the multiplicity of factors that contributed to whether or not local maternity services were offered at either a community or individual level. They included a recognition of the influence of individuals within a community, the de facto criteria for local birth and the extent to which decisions around the location of birth was a collaborative process between the woman and her care provider. The use of consent forms also had an impact on service provision in some communities. Community maternity care services depend, in large part, on whether individual care providers champion the provision of care. The absence of an overall maternity care policy leaves many local services dependent on individuals, which means the services are vulnerable to closures or intermittent service provision when the individual leaves the community either permanently or for a short time. In some communities, care providers worked together to support local care and, consequently, had a profound influence when

they felt local care was not safe. In this community, care providers took it upon themselves to warn the larger community they would no longer provide local services, due to their concerns about safety. The participant who related this account noted that even though there had been no formal rescinding of the warning, a few years later local physicians decided to reinstate local birthing and did so.

> *Some of the doctors had gone to the lengths of taking an ad out a full page ad in the paper saying they do not recommend women to have their children here; it just was not safe and they were not prepared to provide the service. There's never been anything put out to rescind that ad by the way* (Town 2 - 023 : 94 -- 99).

The system dependence on individuals or small groups of providers contradicts the notion of sustainability and destabilizes the overall system as long-term planning is not possible. As one participant observed:

> *I think this is always going to be a place where people are turning over in terms of physicians and nurses….So even if you've got a keen group of docs now who want to do it and are going to do all the training and keep up to date and all that, I don't necessarily see it as continuing five years, ten years* (Town 2 - 021 : 652 -- 661).

Criteria for Local Birth

Beyond their role in establishing whether local obstetrical services would be offered in their community, care providers also determined who would be eligible to access such services should they be offered. Care providers with more and current practice experience were more likely to qualify both their safety and risk assessments with particular preferences or criteria for the kinds of deliveries they were comfortable supporting and the necessary conditions. Most of the physicians in this study had a clear sense of the criteria they used to determine a woman's suitability for local birth when maternity care was offered in the community. Criteria included parity (the number of children the woman had had, if any), whether she had had a previous Caesarean section, and whether there were other medical or obstetrical conditions that would contraindicate a local delivery.

The actual process of deciding which of the women should be referred out of the local community to birth at referral centres before the onset of labour, however, depends to a large degree on local care providers' tolerance of uncertainty and a woman's commitment to local birth. There are no clear guidelines for women having uncomplicated pregnancies. Women having their first birth (primips) are more likely to be transferred during labour than women who have previously delivered vaginally. Consequently, some practitioners and some communities recommend that all primiparous women birth at hospitals that offer Caesarean section backup. One participant recognized the increased confidence of practitioners approaching the birth of a multip when compared to a woman having her first child.

> *If I had no O.R. staff in either place within 30 minutes, I didn't think twice about it, because I didn't need the stress of worrying about what if something*

happened and multips can get into as much trouble but there seems to be a higher confidence level of doing the multips than there is with doing a primip (Town 1 - 005 : 1212 - 1217).

Another practitioner, however, saw little difference in the possibility of complications based on parity, although did note differences in the type of challenges likely to be encountered in each.

What we've seen over the years here is we have more problems with multips than we do with primips. Primips usually come in; you may have a longer labour but that's about all and deliveries are usually no problem. You end up with more difficulties with multips who end up transverse and need help turning the babies and whatever else, as opposed to your primips. The odd time that they've got hung up and had to be shipped out you know and a primip too for a long labour, but not as many as we would have had with multips. And with multips, you've got more chance of ruptures and all the rest of the things than you do with primips. And if they have routine ultrasounds done to be on top of anything, I think that then there should be no reason that we shouldn't be able to do them all (Town 3 - 004 : 311 -- 326).

Beyond parity, some care providers had set parameters around who they would feel comfortable delivering and who they would refer to a larger facility. One participant offered the following list.

I do not deliver primips, OK, you never know. I do not deliver after a Caesarean. I do not deliver if they are more than parity seven, because of the risk of hemorrhage....[T]hen depending on whatever [medical] problem they might have, I do not deliver them. And I talk to them at the beginning of my intake that if anything happens throughout the prenatal care, then I might choose to send them away for delivery (Town 4 - 003 : 62 -- 71).

Socio-economic status was another important issue considered by caregivers in making recommendations about where a woman should birth.

Some may choose to [deliver their babies out of town], OK. They usually see the doctor who delivers them like a couple of times before they go there just to be familiar with the face and the doctor and everything. But most of them I see do have financial problems and they cannot afford to go down too often (Town 4 - 003 : 100 -- 106).

Local Birth as a Collaborative Practice
The local care providers in this study who were committed to supporting local birthing engaged with women to consider and adequately plan for possible delivery scenarios. Communicating and planning together about how to respond to unexpected possibilities, which may necessitate transfer to a referral community, was seen as an important part of

the care. This collaborative approach uncovered other areas for important consideration, including what referral centre may make the most sense for a woman (e.g., where she may already have a place to stay and support network) as well as relevant psychological factors. One participant relayed what he felt was an appropriate decision-making process to engage in with a patient.

> *No, they shouldn't go [to the referral community]. They should go when it's time, but they should be prepared right from the moment she's pregnant in the first prenatal visit. Start talking that there is the chance and if it happens ask her: "How would that impact you?" Start thinking [about it] not when she has to go [but] well before. Have them think and plan, and if it doesn't happen, it's wonderful. Doesn't hurt to plan so then it doesn't all come at once when you hear you have to go, you know, blah blah blah. And you have nothing in place. And the whole thing. Talk more about feelings when you're pregnant and feelings about when the baby arrives* (Town 2 - 022 : 180 - 208).

Prenatal visits were mentioned by several care providers as good opportunities for communication and some collaborative decision making, but the limited time was seen by some physicians as inadequate for counselling and emotional support. These physicians suggested involving other members of the care team, such as doulas, in providing further information and counselling.

> *[There is] very little psychological teaching or listening and that's not — doctors can't do that — they haven't got the time for that, you know. I mean a good prenatal visit, you know, if you have the time, in 15 [minutes] is quite often the most time you have. Well, you can't if you want to do the technical part and the assessing of risk, you haven't got time to throw that in as well. I mean use your 15 minutes wisely and doctors do what they do best is that part. And find somebody else that goes [and] does the other stuff. OK, that's ideal* (Town 2 - 022 : 180 -- 208).

Consent Forms

In some communities, care providers employed written consent forms as a way to ensure a woman had an understanding and acceptance of the known risks of choosing to birth locally. However, many participants contested the intent of consent forms. Some physicians regarded the consent forms as an explicit waiver signed by the woman in which she acknowledged that she understood that birthing rurally was dangerous and she was willing to undertake the risks. From this perspective, some care providers felt the signing of the form absolved them of responsibility for unpredictable complications. One participant supported this view.

> *So at least they know the risk they are taking and with a consent form…I find it will sink in better with some people and actually read it and understand the risk* (Town 4 - 003 : 794 -- 809).

Other physicians felt that a process of formal consent was inappropriate and undermined the relationship between the physician and the woman preparing for birth. This was seen to be particularly true for some Aboriginal patients. As one physicians noted:

> *I would use [a consent form] if I thought it would truly get the message across better than having a discussion…especially when I think of some of the Native patients here. I'm not sure if it's going to make a big difference over having a reasonable discussion and…I think even if you're worried about medical-legal protection, I don't think a piece of paper makes that much difference over having a verbal discussion. …I think there's a fine line between being informed and being scared and overestimating the risks, and I suppose that depends on a variety of things* (Town 2 - 021 : 215 -- 226).

The Challenges of Practice in Areas with Limited Obstetrical Services

Beyond the contextual issues of safety and availability of services, the participants we spoke with had a clear sense of the day-to-day challenges they, as practitioners faced. These challenges included patient-centred challenges, the continuous need to balance risks and benefits in light of multiple options, and the awareness most participants had of the implications of leaving the community to give birth for rural women.

Patient-Based Challenges
Complications in Pregnancy
Rural maternity care providers report considerable stress in supporting local delivery for women in remote locations. This stress is compounded when pregnancy is complicated by problems, such as suspected poor growth of the baby. When poor growth is a potential problem, then an ultrasound is indicated, which usually means a trip away from the community for the mother. This can be expensive and puts an additional burden on the physician or midwife to justify the need for the test.

Inadequate Prenatal Care
Providers report that women's attendance at prenatal care can vary considerably. Sometimes, women will present for the first time in active labour on the verge of delivery. These unexpected maternity cases can be particularly stressful as even routine tests, such as ultrasound and basic lab work, may not have been done.

> *And I think that in these remote areas it's probably better that they do have ultrasounds routinely — you know to be on top of that because of that. Because there are a lot of women…there was one that delivered just, what was she? Five months, 20 weeks, so that…was earlier this year just a few months ago, and the baby was too small but she had had no prenatal [care]. Nobody knew she was pregnant, you know, and you get that in these areas. You get that a little bit more; where they come in or they haven't seen a doctor in three months and they show up for delivery. I think that's probably the biggest problem that we have…I think that that's the one of the biggest*

> *concerns with physicians and is a lot of these women don't keep up regular*
> *appointments* (Town 3 - 004 : 129 - 141).

A Balancing of Risks

Practitioners in this study, whether they were currently providing obstetrical care or not, had a sense of the need to weigh the risks and benefits of local care. Although many factors played into the equation, the risks around transport out of the community, should it be necessary, was thematic to most practitioners.

Many described the uncertainty of birth and the unremitting risk of a complication that might overwhelm the resources of the practitioner and the small hospital. When one spoke of the knot in his stomach the week before a patient was due, he captured the sense of anticipation that, for many of the physicians we spoke with, bordered on anxiety. Transfer or referral to a larger facility was perceived as a relief of this anxiety and for some, was precipitated by relatively minor complications of pregnancy.

> *If something goes wrong…going through labour and…no one can guarantee*
> *it so why would you jeopardize your unborn baby's safety and your own*
> *…and as I say, I realize there's an expense…but you know what? That's one*
> *of the drawbacks of living rurally; it's just something that you have to expect*
> *it…you have to go out for certain tests* (Town 3 - 003 : 72 -- 80).

Even when transfer was initiated, however, anxiety remained due to an understanding of the inherent risks in travel across often rugged geography that is endemic to rural residents. Travel on rural roads or by emergency transport during labour can be dangerous. These risks have to be balanced against the risks of delivery in a small hospital with limited ability to deal with obstetrical complications. Rural practitioners and the birthing woman are acutely aware of this balance of risks.

> *Winter driving [in rural referral region] can be a challenge and so, there is*
> *risk involved, no question. You know, I think balancing the risks though, I*
> *think it's also, when you think of the alternative; of delivering in a remote*
> *area without adequate backup is also a risk. So it's a balancing of risks, I*
> *guess* (Town 4: 335-340).

As many care providers are aware, there are also economic issues that may influence choices. The same participant went on to note:

> *You know, there's the safety issue and there's also economic issues; time,*
> *you know, for a patient of mine to come in and see me here…they might drive*
> *for five minutes, and it hardly disrupts their life. For someone from [rural*
> *community] coming in, it's the whole day and often the partner has to take*
> *the day off from work and safety on the highway, you know, so there's a*
> *number of issues. So, it's certainly not safe, but I guess you have to look at*
> *what the alternative is* (Town 4 : 335-340).

The concern about the risk of emergency transport over rural roads and the real risk of a motor vehicle accident was especially salient around emergency transport during labour.

> *You mean deliveries here in [community]? I think they would be unsafe. Because there's always that chance for complications and somebody hemorrhaging and it is an hour and [on] winter roads it could be a lot longer* (Town 01 - 002 : 409-417).

Many care providers recognized the risks to the patient who was being transferred, but also to the ambulance attendants and other emergency transport personnel.

> *It's frustrating sometimes especially for the physicians who are trying to and it's taking so long, like the time frame is bad, and in the winter like I say with the problems with the roads and it's not only hazardous to the clients it's hazardous to the ambulance attendants and everybody out there* (Town 01 - 001 : 889 -- 895).

Emergency transport personnel play a crucial role in supporting local birthing services. If problems arise in the birth, then the possibility of transport provides a way out to access needed interventions. In small communities, ambulance personnel are volunteers and represent a broad range of experience and qualifications. Some practitioners expressed concerns about the level of skill local ambulance attendants possessed and how this added yet another factor to consider in advising a woman about the decision to choose to attempt local birth.

> *And I think too, the other thing is the ambulance attendants here [have] basic training. They do not, you know the last delivery that happened in the community they were involved in was probably at least eight years ago so...so they have no experience delivering* (Town 01 - 001 : 889 -- 895).

One community member with medical training was concerned enough about the qualifications of the ambulance attendants to offer her/his skills to the ambulance service in the hopes that this might reduce the potential for a negative outcome en route to the referral community.

> *I only joined the ambulance so I could offer my knowledge and experience... 'cause what happens here a lot is that the ambulance ends up taking women in labour across to the other side to the hospital and none of the attendants are trained and they're terrified that the baby's going to be born and they don't know what to do. So I said OK I'll join that was my primary reason for joining and I was on the ambulance for a couple of years. And in that time I did attend a few births* (Town 2 - 018 : 289 -- 300).

For many practitioners still offering obstetrical care, there was a balance between the anticipation of providing care to a women who might successfully birth locally with the attendant exhilaration and joy that comes with a successful delivery, and the anxiety related

to the recognition of the perils inherent in their only safety net — transferring to the referral hospital.

Leaving the Community for Care

The care providers in this study were aware of and reflected on the challenges that rural women face when they have to leave their local community to birth elsewhere, including the implications for the woman's family and financial considerations. This was particularly important when women had other small children at home.

> *You have to try and accommodate people's choices and try and recognize that for some people it's really not an option to [leave the community] financially or otherwise. They have kids and all kinds of things, and we just have to try and accommodate their wishes and try and make it safe* (Town 2 - 021 : 178 -- 194).

Participants had ideas about how the health care system could overcome some of the hardships faced by rural women and families who needed to birth away from home.

> *I think they need possibly a hospitality room where the mom isn't necessarily admitted to hospital, just a place where she could go and…have some lounges and a little TV or kitchenette where they could just spend some time in case the couple just wanted to be together and not travel back to [their town]…Because the two I talked to, they were in labour, it was just a matter of maybe in eight hours they needed to be admitted, but for six to eight hours, do you travel back home just to turn around and go back* (Town 1 - 008-009 : 587 -- 598)?

In some cases, individual women were supported in innovative ways so they could cope with the high cost of being away from home for a lengthy period. One participant recounted the efforts a patients' care provider took to ensure she was able to get to the referral hospital.

> *And so in this instance actually her doctor's office, they pooled money together and got her transportation money to get her to [referral hospital]…So anyways the doctor was able to get her [out], had a place set up for her* (Town 4 - 001 : 90 -- 115).

Improving the Context of Local Maternity Care

The lack of maternity care providers in rural communities is central to the loss of local birthing services. The care providers who participated in this study proposed many innovative solutions including recruiting midwives, organizing doula support to quell concerns around nursing shortages, and implementing job-share arrangements among physicians. Recruiting midwives to be part of the rural maternity care teams was seen positively by some local providers.

Well…we had a midwife here for awhile and she was trying to set up practice in the [rural region] and I had absolutely no objections to it at all because there was a lack of staff skills in maternity so [if] you've got a midwife who is there then you have a lot of backup and a lot of coverage (Town 3 - 004 : 641 -- 646).

Other rural physicians, however, expressed anxiety about midwives practising in local communities independently of local hospital-based care providers.

We don't have a midwife in [our town] for the fact that…if complications do happen then that midwife has to work with us to get the baby out anyway so I do not think this is a safe place for them to be…without Caesarean capacity… We decided we cannot have a midwife in the community where they will not work with us, because they have a different degree of, or a different way, to assess risk (Town 4 - 003 : 481 -- 493).

One community of the four included in this study had doula support available to birthing women. A practising doula described the contribution she made to local health care teams.

We're teaching them how to eat properly, how to eat when they're pregnant, how to feed their kids, understanding that it affects their brain development, it affects their teeth, you know, that they need to be thinking further ahead you know (Town 2 - 017 : 222 -- 231).

Creating sustainable practice models has led a number of rural physicians to job share. While continuity of care is consistently broken in the short term, after a few cycles, longer-term continuity is established and the likelihood of sustainable practice increases.

We have three full-time physicians here, but there's only one guy that's working full time, the two other physicians are shar[ing] and they're three months on, three months off, three months on, three months off, and it's all men and which is good, but lots of times, women feel more comfortable with a woman (Town 2 - 008 : 234 -- 242).

Importance of Local Birthing to a Community's Integrity

Throughout the course of this research, it was clear that local birthing is an important part of a community's ethos. This was particularly apparent in one of the four communities we visited where members — from medical and nursing personnel to birthing women and their extended families — converged to create a nurturing environment for local birthing. There was a mutually supportive relationship between local care providers and the community.

The rooms are filled…there are relatives out in the hall. Everybody's waiting for that baby. And the nurses…I know they love it, they think it's great, they've never complained and most of the doctors I've talked to think it's pretty awesome. And you know that kind of thing, that's one way where the

*local community has influenced the medical community in a really good way.
They've just said, "oh, what we're doing, it's happening," and they accept it.
So that's nice* (Town 2 - 018 : 953 -- 969).

Another care provider in the same community described the experience of local birthing in the following way.

*Births are one of those real team things that bring everybody together. It's
more like a family here, because we're a small town. Being [isolated] too,
there's not a lot of options. We end up having to be resilient and having
strong convictions. Delivery is a key and vital service, and we need to keep it
here. The first time we put that article in the paper [stating a policy of no
local births], it was with great angst. That was a really sad day that we have
to put that in writing. We were hoping that this wasn't the beginning of the
slide to the end* (Town 2 - 005 : 85 - 95).

A Care Provider's Concluding Thoughts

For some care providers, giving up local maternity care services took the heart out of their practice. Maternity care was not only one of the highlights of their practice, but also an important part of the intricate relationship that bound them to the community. As one physician articulated, his job satisfaction was intricately linked to the opportunity to provide birthing care to women from the community.

*I think it's been very disappointing for me, because it's a part of a practice
that I really enjoyed…[the] continuity of prenatal right through delivery.
And I think for sure, you know, it changes the relationship…when you see
someone through the delivery of their child…I really miss that aspect of it.
And I think it's certainly a joyful part and [there's] not very many other
instances where you get that kind of experience so I miss that. And I just, it's,
for sure, a lack in my practice too, and I worry about, I suppose, about losing
certain kinds of skills, not doing it, and I think it just has contributed to me
being dissatisfied with practising here not being able to do that 'cause I think
it, just to me, it starts there and it extends to other areas; just a lack of
commitment to provide basic care* (Town 2 - 021 : 278 -- 294).

Summary

Results of interviews and focus groups with care providers, administrators and local leaders revealed their awareness of the difficulty practitioners have in maintaining their skills due to the low volume of deliveries. Care providers, administrators and local leaders also had concerns about the sustainability of maternity care provision should the low volume decrease the confidence level of local practitioners. Despite the expression of these concerns, care providers, administrators and local leaders recognized that despite challenges associated with providing rural maternity care, as long as families live in rural communities, women will get pregnant, and birth will happen. Participants were forthcoming with their perceptions of the

safety of maternity care in the absence of local Caesarean section capability and how this, along with other factors, influenced the sustainability of local maternity care services. Many participants clearly articulated ideas on how to sustain local birthing services, and the importance of a collaborative decision-making process around community birth services.

7. RURAL WOMEN'S EXPERIENCES OF BIRTH

Women living in rural communities shared cogent narratives that were rich with description and emotion, and conveyed the realities of rural obstetrical care in a time of diminishing resources. These realities included a recognition of the stress inherent in birthing for most rural women whether in their home hospital or in a referral community. These stresses were related to their uncertainties around the specifics of care, difficulties in securing a continuous care provider, and the financial implications of leaving their community for care. Further themes within the narratives included participants' recognition of the importance of birth in a community, their desire for local birth, a consciousness around risk and risk assessment, and recognition of their geography and the attendant consequences for access to care it precipitated. Many of the women expressed a desire for midwifery care. Aboriginal participants articulated different challenges around access to care and the implications of the lack of local access. This chapter thematically presents the findings from the interviews and focus groups to elucidate the experiences of rural parturient women in British Columbia, starting with their insights into the importance of birth for their community.

Stress of Birth for Rural Women

Many participants had a clear sense of the difference between living in and receiving care in a rural community and the experience they might have if they lived in an urban environment. Awareness of difference extended beyond access issues to include social determinants inherent in living in a rural environment, including economic realities. The realities of rural living for many of the women were implicated in the stress they experienced around giving birth. As one participant expressed:

> *Families in the city…don't have to worry about those sort of things whereas we do and…in the rural towns you're looking at families particularly up here who face shut downs, who face you know, other sorts of financial obstacles like that so that's just something else that makes the whole birth process a little more stressful* (Town 4 -- 012).

A thematic source of stress for almost all participants in this study was being uprooted from the family and community networks.

> *I think the biggest one was not having my family. That was really that was one of the sacrifices we made that probably had the biggest impact. You know like all your friends and stuff I mean I had lots of friends in [referral community] but…I really missed like in [referral community] the nurses were wonderful…the doctors the care was really, really…good but it just wasn't the same* (Town 2 -- 016).

In many instances, their mother or other family members accompanied birthing women to the referral community. Although the participants appreciated the social support and companionship, the presence of another person often created social tension as the family

waited for the birth to occur. Several participants noted a link between this tension and adverse birth outcomes.

> *Now I don't know if you guys have ever spent 17 days with your husband and your mother…[laughter] in the same hotel room…I have another [friend], she ended up having a Caesarean and she really believes…that's why she ended up having [a Caesarean], because just being away from home was just such a big deal for her and she stayed with her mother-in-law…her blood pressure just went off the chart and she ended up having to have a Caesarean. So we're saying it kind of jokingly, but it is a reality of having to stay like that* (Town 4 -- 002).

The Importance of Birth in the Community

Many women we spoke with had a strong sense of the importance of birth in the life of their community and recognized the cohesion and sense of historical continuity it brought. Many poignant stories were told of the restorative power birth had in the face of tragic events and death, and of the ability of the birth of a child to complete the circle of life and create balance.

> *The hospital sent me a card and thanked me, because there had been some major tragedy in this community just before and that was really sad for a passing away and all this crazy stuff, and so it was really a huge thing for the hospital to experience some positive life coming in* (Town 4 -- 010).

On a more specific level, sharing someone's experience of birth creates a sense of authenticity of relationship that cannot be created any other way, perhaps even more intensely when the community is small and other resources are limited. The bonds of friendship formed in this way strengthen social support networks that last well beyond the birthing experience. In one community, such sharing extended to a large group of friends who supported each other through birth.

> *We all attend each other's births up here; there's a ton of babies, so we've all experienced quite a handful of births which is incredible, like every one it's getting more and more, you know, it's getting better and better and support is so…I mean we're a tight circle so we all know each other and without having to say much* (Town 4 – 010).

Beyond the shared experience the women in this group had of being at each other's births was the recognition of a common experience between them and all women who birthed in the community.

> *I've talked to women who have children my age who birthed their children in the same room that I birthed mine in you know so it's really it's a really neat connection to have with all these people* (Town 4 -- 010).

For many women, recognition of the importance of the experience of birth to their community increased their desire to birth locally. It was, however, augmented with other motivating influences.

Community and Compromise in Local Birth

Overall, the desire to birth in their local community represented a convergence of participants' values and beliefs including recognition of the importance of a sense of belonging and the social ties that bind them to the community. As one participant said:

> *I think the most important aspect was that I was close to home, I was close to my kin. I think that ultimately is the most important thing surrounding a pregnant woman is the comfort of other women and if there's a really strong comfort level then things are going to be so much easier* (Town 2 -- 010).

The physical geography of the community and how this enhanced their lives — and the lives of their children — was also thematic, as was the richness that came from a sense of history with the community. Combined, these led to a sense of kinship between the birthing woman and her geographic/social community and the desire to introduce a child into this richness.

> *I don't know just 'cause she was made here and it's an experience to have her here. I don't know, a lot of people say like I don't know how they explain it...what's the word...it's a unique town it's a unique place you know it's neat to say you're born in the [my community] so that's basically why I wanted to have her here. Plus I've been here all my life and I wasn't born here and I wish I was* (Town 2 -- 002).

This desire for local birth often precipitated recognition of the need to make compromises around the details of care. An example of this was one participant's agreement to having an ultrasound to assuage her care providers concerns, even though she did not feel she needed one.

> *So this guy came in who did a quick [ultrasound].... I told the doctor like I really don't want to do this and he was like "real quick, real quick" and I'm like "if we can do it real quick, OK."...I honoured him so much for being so cool with birthing here. I thought, OK for his comfort level I'll do it, because he could have said "no, I'm not going to birth here for you" and I would have had to leave or find a different doctor. I kind of have to make these compromises* (Town 2 -- 010).

For many participants, the desire for local birth was so strong that when it was not possible they experienced high levels of stress and anxiety.

> *It was just, it was just so stressful. I can't explain like the anxiety it created for me. You know all my support was up here. Everybody that I knew that was*

> *supporting me through all the other stuff that I was going through as well*
> *was up here* (Town 4 -- 006).

As is conveyed in this excerpt, the participant's pregnancy was occurring within a larger context full of complexity. Leaving the community, then, not only had implications for her pregnancy, but for her larger life rhythms as well.

The Realities of Care for Rural Parturient Women

Despite the desire expressed by most women to give birth in their home community, obstacles were considerable, and many were enmeshed within the larger context of rural health care delivery. All the women faced similar challenges in receiving care during their childbearing years including securing a care provider, either in their home community or the referral community, and working with the realities posed by physical geography.

Challenges in Securing Care
As noted in the previous chapter, there are systemic challenges in recruiting and retaining physicians in rural communities. This is due to the stress of continuous or prolonged periods of being on call, the lack of opportunity for continuing medical education and the lack of access to other professional resources. As a consequence, health care delivery to many rural Canadian communities relies, in whole or in part, on locums. Although continuity in the availability of care is usually maintained for rural residents, continuity of care provider, and sometimes philosophy, is often disrupted. This has particular consequences in the childbearing years when the frequency of care provider visits is high, decisions are time limited, and psychosocial variables have a significant role in the process and outcome.

Most participants identified issues around the lack of continuity of care as being salient within their experiences of birth. Thematic to the observations were the challenges in conveying their medical history to new care providers, the difficulty of establishing a relationship based on trust when they saw the care provider infrequently or for a limited number of visits and negative consequences to multiple, sometimes contradictory, approaches to care. As one participant noted:

> *The care was really good from the first physician. Unfortunately, in this*
> *community, doctors can move at any time so at about, I guess it was seventh*
> *month, my physician had left and a new one had taken over, and then it*
> *became a little harder not knowing them as well as the other doctor and not*
> *having the history* (Town 3 -- 004).

For many of the participants, the lack of continuity of care was tied to the lack of choice in care provider, due to the perceived tenuous nature of securing *any* regular care. This was an issue for many women who preferred to have a female care provider. As one participant said:

> *No they don't stay here. The most they stay here is six months. So I started*
> *seeing one doctor and he was just at the end of his six months so he left, and*
> *then I started seeing another doctor; I think I seen twice. And then I think he*

was at the end of his too so he left and then I had one more lady and I don't know you just see all sorts of doctors; it's never the same one. And there's no female doctors here, and if there is it takes you like three, four, five weeks to actually get in to see her, because they're so booked and all the ladies want basically a female doctor (Town 2 -- 002).

The desire to have a female care provider, and the attendant lack of access to female providers in many small communities, led to several women in this study electing to leave their community for birth and also the prenatal period to secure such care.

I really wanted a doctor that was younger and had children of her own; if she happened to have children of her own it fit perfectly actually. I find that they're more up to date with what's going on with illnesses things like that for the kids. And it's none of this old time well you know back 50 years ago just give them this and that and they'll be fine. So I set up with a doctor in [referral community] (Town 1 -- 007).

If a regular, local care provider was available to support a woman through pregnancy, labour and birth, and local birth was available, women in this study faced further challenges around securing the support of their care provider for a planned local delivery. Several participants expressed the sense of having to "convince" practitioners, even those supportive of local birth, that they understood the risks and had a high level of personal initiative and determination. One woman recounted her care provider's reaction to her desire to remain at home and her strategy for assuaging his fears.

[When I] said I'm doing it here the doctor almost started crying; he was really upset…he didn't want to let me, and one of the doctors said well I wash my hands of this whole thing and I said fine and then the other one was in such a fluff but he's a really nice guy…and I just reassured him I said look…it's going to be fine I'm going to be Ok. I think that helped him. So as it was, he did say and well if you go over 41 weeks, you should go off and I just nodded but I had no intention of going (Town 2 -- 001).

Care providers recognized and respected the choices of some participants, within a context of known risks.

No, she never really recommended [that I leave]. She was a very down to earth woman who really wanted to honour my choices but she, of course they all warned me of the risks. They have to do that (Town 2 -- 010).

Geographical Realities
The realities that provide the context of health care delivery to rural women included the physical geography of their community (and access to the referral community), regular transportation mechanisms and weather, all of which had an impact on the planning and experience of leaving the community. A common concern was the possibility of inclement weather.

This winter was quite mild so it was actually not too bad. We were a little bit worried because of all the snow…it was a bit of a concern thinking that…we'd have a roadside delivery coming on, but it didn't go that way so it's OK (Town 1 -- 010).

Related to the weather were concerns around access to transportation, whether it was by road, water or air.

Well I mean it's the ferry. No one likes to go on the ferry when you're pregnant but no it was fine. 'Cause I mean you deal with weather you know. My daughter was born in January, so we got stuck over there in the middle of a storm, but you get used to it. I mean it's not horrible (Town 2 – 016).

The Case for Local Birth

The women we interviewed had a clear sense of the local resources available to them, including institutional/infrastructure, technological and health human resources. There was also awareness, although limited, of out-of-community resources (such as billeting lists for securing accommodation) should care in a referral centre be necessary. The availability of resources was not confined to those needed for labour and delivery, but extended to the perinatal period.

Local Resources
When local maternity resources were available, several participants recognized advantages to giving birth in their local hospital in contrast with the constraints perceived in larger facilities. Common to the perceived advantages was a sense of flexibility that allowed the participants to arrange their care in a way that met their needs. For example, one participant noted that during her local birth, her husband — and baby — were able to room in with her after the birth, something she felt would not be possible in a larger hospital.

Another thing was that [my husband] was able to sleep in the room with us and totally be there with us…. You know a lot of the big hospitals you don't [let you do this]. In fact, I heard in big hospitals they don't even allow you to sleep with your baby that you have to have your baby in a bassinet beside you; like you're allowed to at least have them but yeah like you know in this hospital he was just in bed with me (Town 2 -- 010).

Many participants who were able to stay in their local community to give birth commented positively on the physical birthing space, emphasizing the ambient advantages they experienced and the feelings of comfort the space engendered.

The maternity ward here is really incredible compared to [next community] where they don't really have…. They have a ward, but it's not really separated from the rest of the hospital whereas this one is separated by double doors, and there's you know a birthing room and then a couple of

recovery rooms, and then it seems like kind of more your own world and usually you're the only person there too…yeah well the one thing that I recognized was that it was a really, really comfortable place to be to birth (Town 2 -- 010).

In instances where local birth was not supported, the availability of birthing facilities and resources became a focal point for the perceived irrationality of the organization of service delivery that many participants experienced. In one community, several participants commented on the birthing room in the local health centre that had been transformed into a physiotherapy room. The observations of the following participant were common to many.

Because our hospital has the facilities, it has a brand new birthing room with a whirlpool tub and you know…that's not being used. The [next community] hospital has the same things you know a birthing room that's not being used and a nurse midwife whose expertise isn't being used (Town 4 -- 012).

Although participants felt that the birthing facilities — whether they were used or not — in many of the local hospitals could create a positive birthing environment, they also recognized that there was a lack of the skills and technological resources that would be necessary in the case of an emergency. The lack of Caesarean section capability and pharmacological pain relief were identified by most as the drawback to local service for labour and delivery. Many participants also commented on the lack of access to ultrasound technology during the prenatal period along with a desire for such access.

I think it would be a good idea to have some qualified [here] to run an ultrasound machine. Then women wouldn't have to travel. Like when women are overdue they like to check it out, right. And I mean, who wants to travel to [referral community] to have an ultrasound when they're overdue? What are the chances that you're going to birth on the [way] or something that's just insane to think about (Town 2 -- 010).

For some participants, however, diminished access to technology was a large part of choosing to stay in their home community to birth. Lack of the local option of interventions, such as epidural anaesthesia, was seen as a positive feature rather than a reason for birthing elsewhere.

And you know part of it was I didn't deliver with any anaesthetic and I didn't know the difference. I didn't have the option so you just do it. The pain goes into its own little world and you just do it, right? When you don't have a choice you just don't factor it in (Town 1 -- Focus Group).

An awareness of local resources extended to human resources and challenges that local providers faced in offering obstetrical care. Many participants noted that a consequence of most women leaving the community to give birth was the reduced confidence physicians and nurses had with obstetrical skills. In turn, this created a difficult scenario from which to re-establish local birth. As one woman noted:

I think that if the nurses and the doctors had the experience with labour and delivery, even without C-section abilities, that they could be safe.… Right yeah I think one of the concerns is the lack of babies that are born up here and then the nurses and the doctors…don't get the experience. And then all the babies that are born up here, the scary kind of babies that they wish weren't born up here like [daughter] being early or have some kind of fear around that and babies that come unexpectedly (Town 4 -- 005).

An awareness of what was no longer available locally led women to have a ready familiarity with support available to them when they left the community. Initiatives they were familiar with included a billeting system for accommodation in referral communities and central lists of available resources. As one respondent commented:

Well [name's] on a project now that's sort of co-ordinating all that kind of information better, because I mean it is a lot through word of mouth but now there'll be sort of a central information bank where you can go…it's her that's given me a list of doulas that I can call when I get down there (Town 4 -- 012).

Perinatal Resources in Communities without Maternity Services
Participants in this study experienced changes in prenatal and post-partum services, such as prenatal education. When prenatal education was not offered locally, alternative strategies included one-on-one educational support from the local public health nurse or trying to access services in a referral community.

Participant: And I just couldn't get in; there was just never a class. And there was one that was held in [referral community], and the weekend that it was held there was a…a snowstorm.…It's hard to get into prenatal classes.
Interviewer: So do you have to almost register as soon as you find out you're pregnant?
Participant: Or a year before (Town 1 -- Focus Group).

Those who did have access to pre (and post) natal support within their community recognized the value of community-based care through, for example, the La Leche League (an organization dedicated to the promotion of, and education around, breastfeeding).

So having La Leche was just incredibly supportive for the first, well they still are.…We were able to attend the prenatal classes you know. I was just able to be in my home where I was comfortable during a time that you know you don't want to be away from home and in a strange place (Town 4 – 012).

There were a range of experiences expressed around the availability of post-partum care, the biggest challenge being availability of and access to public health nurses. Some women experienced a lack of local care during the immediate post-partum period. Those who did have access to local care in the post-partum period deemed this important support.

The public health nurse came by a week after I got home. She was my public health nurse with the first one 18 years ago. So she knew coming in that this was my fourth, but she was good. She always has been. And what she did was offer me that any time I wanted to check on his weight or had anything I wanted to discuss…she was more than happy for me to call her and ask her. I don't think that really happened the first time, because there were other services there, but it's almost like they're extending more and trying to compensate for the fact that there is a loss of services, because she was more than willing if I had anything I wanted to talk to her about, get his weight checked; I was worried about anything to not hesitate to call down to the health unit so that was really nice (Town 1 -- 007).

Where to Give Birth?

Within a psychosocial context that gives rise to the desire for local birth, the experience of challenges to securing adequate and continuous care, and an understanding of the limitations to care based on local resources (including the absence of local Caesarean section capability for emergencies), women from small and isolated communities are faced with the decision of where to birth. For women from a growing number of communities, local birth is excluded from possible choices if the birth is to take place within the health system. For others without complications during their pregnancy, however, local birth may be an option. Women in this study incorporated the variables described above (desire, challenges and awareness of limited resources) into an understanding of their temperament, needs and family context in their decision making. Guiding this process was an interpretation of risk.

Considerations of Risk
For the most part, participants themselves had internalized an understanding of the risks involved and benefits accrued in staying in their community to give birth. When their assessment of the risks outweighed benefits in their thinking, participants elected to leave the community to give birth. One participant summarized the resource issues that were salient for her:

They don't have an…ICU…they don't have any of that type of stuff here in case something is wrong with her; they have to medivac her out and that just takes too long…the baby could be like dead by then (Town 2 -- 002).

As this participant explained:

And anything could happen to her; she could end up dying and you know I didn't want any of that in case you know her lungs weren't developed or stuff like that. So I decided to have her in [referral community] (Town 2 -- 002).

For many of the participants, the chance that they would have to be transferred out of the community during labour was not one they were willing to take. Concerns around transfer focussed on both physical and social concerns. The following participant felt the length of time of transfer between home and referral community was too long.

I sure as hell wouldn't want to be put in an ambulance or put on a helicopter ambulance [to be taken to the] hospital. No. So for me… staying in [my community] personally, even if it was available to me, I wouldn't stay, because I just wouldn't want to be moved. And I don't trust the process of moving as somebody who I know, I think it was three hours from leaving [my community] hospital to arriving in [referral community] hospital. Well two and a half hours regular drive gets you there. So…I'm not comfortable with the time frame they are working within getting us out of here (Town 4 – 002).

Consideration of Social Risks

Another participant was more cognizant of the social disruption that would occur if she had to be transferred out during labour, specifically around the loss of a support system she would have established during labour.

Always in the back of my mind…there's that I might need to go to [further referral community]. And that was something I really didn't want to do…. Like I just thought you know sort of the safety factor like…in labour and all of sudden you've got to get packed up and you're going to somewhere, and it's all new again. You don't know the nurses even though they've been with you for sort of the last six or eight hours and it's kind of nice to see a friendly face (Town 1 -- 011).

Ultimately, however, the fear most participants expressed around the possibility of intra-partum transfer concerned giving birth in a referral community — alone.

I've had a couple of friends here who've…tried to deliver and have been flown off…10 centimetres dilated in a helicopter being told not to push and you know it's like what kind of crappy experience is that you know and she wasn't allowed to take her partner with her. So she went over by herself with this medical team that she didn't know and birthed this baby by C-section alone and I think that's just horrendous (Town 2 -- 010).

Consent Form

Some of the research communities had developed a consent form for women considering local birth that conveys known potential risks associated with birthing without immediate access to Caesarean section capability. Although instituted as a mechanism for achieving informed consent, the consent form for local birth was, for many of the participants, the catalyst for their decision to leave the community to give birth. This was a consequence of both the medium through which the information was conveyed and the content. Many participants interpreted the act of being required to sign a form as a signal that what they were intended to do — birth in their local community — was beyond standard practice and thus required special acknowledgment. For many, this suggested that local birth was an inherently risky proposition. The women in our study felt the textual presentation of the information overwhelmed a more integrated sense of weighing risks and benefits that many of the women had hoped would be presented. One participant described the relationship between the consent form and her decision to leave the community.

I think most of [my decision to leave the community] was they made me sign a sheet here when I had decided on having her here, and it said so much like it says in case something happens you know we might not be able to get her out in time it takes an hour to get the medivac. I was just worried about her. Basically, I didn't care about the cost or the epidural I just didn't want anything really happening to her and it does take a long time and…you could need a C-section right away and you have to wait an hour, two hours like however long it takes. I didn't want to do that. Just in case it brought any harm to her (Town 2 -- 002).

Influence of Care Providers

Almost all participants in this study conveyed an awareness of the influence care providers had in the decision of where, and how, to give birth in communities where local birth was an option. The women recognized this influence was based on the convergence of the need for their informed choice and consent based on available information. However, as with the consent form, women believed the presentation of risks of local birth prevented an acknowledgment or exploration of the benefits. The product of the necessary presentation of known risks without an acknowledgement of benefits was fear. As one participant said:

The doctors put out a lot of fear, especially if it's your first baby and they warn you of all the complications that could happen anywhere (Town 2 – 010).

Sometimes the fear experienced by participants was a direct consequence of the statistical presentation of possible adverse outcomes. Many participants saw a link between such a presentation and coercion into a particular course of care (i.e., leaving the community). One participant noted:

Eighteen years ago my first C-section was here. She was, I had her and then the second one I was going to natural and I went to see a specialist about it and he gave me a one in 200 chance I think of going into labour and [having a] womb rupture. And I thought one in 200! No no no. [He] just set me up for the C-section (Town 1 -- 007).

Others recognized how other women, if not themselves, would be vulnerable to what they perceived as the tactics of care providers using discussions of risk to sway women into specific treatment decisions.

And when I think of like young mums...I have a lot of experience. I have a lot of things I've learned along the way, just coping strategies that help me get to where I am and when I think of if I was 15 or 17 years old first of all being antagonized by the doctors you know and…I would even say as far as bullied. Using their professional opinions to really push it I mean I almost did change my mind and I'm a strong willed woman you know. I'm strong willed and very was very determined and I almost did change my mind (Town 4 -- 006).

Decision to Deliver Away from Home
For the participants who decided to birth in a referral community, they had to also determine which community to deliver in. For most participants the decision was based on:

- where extended family or friends were located;

- the ability to secure adequate and affordable accommodation;

- the availability of technology;

- the reputation of the facility and care providers working within it; and

- the likelihood of securing a continuous relationship with a care provider during the childbearing year.

When family and community resources were located in the referral community, participants had an easier transition than when they were isolated from such supports. As one woman noted:

> *I lived in [referral community] for several years so I had lots of friends there…I know [referral community] very well so I never was really bored. I don't know how well I would have handled it if I had not been from [referral community]. You know I feel bad for a lot of women who go there, know nobody or have nowhere to stay. For me it was no question it was easy for us* (Town 2 -- 016).

After considering social resources, most women focussed their decision making on their knowledge or the reputation of care providers.

> *So I decided to have her in [referral community] 'cause…I heard that they have good doctors* (Town 2 – 002).

Implicit in the reputation of the care provider was whether or not he or she would be available throughout the course of pregnancy and during the time of birth. One woman referred to this likelihood as the "stability" of the community, and ranked it high among the characteristics that informed her decision.

> *Well first of all I had about three different doctors throughout the pregnancy and finally I moved down to one that was recommended to me in [the next community] thinking that because of the doctor situation it was…and it still really is, in a state of who's going to be there when I go into labour and what's you know going to happen here. I decided that I'd maybe go to [the next community] to do it 'cause it just seemed more stable* (Town 2 -- 010).

Also important for the women in this study, however, was the reputation of the referral hospital, information often forthcoming through the network of women in the community who had already given birth. Primary among variables considered was the perceived availability and helpfulness of the nursing staff and cleanliness of the hospital. Some

participants considered whether or not the hospital's policies and practices supported their needs in birth.

> *I wanted to go to [referral community]. The real reason I kind of picked that area was because I had a friend.… She started researching the hospitals, the policies and she wanted to be as free moving within her labour as possible and so she sought out [referral community] and that's why I went that route* (Town 4 -- 002).

Receiving Care in a Referral Community

Many participants received care outside their home community either due to the absence of local maternity care services, their ineligibility to access such services or their preference to give birth in a context that supported contingencies for emergencies. Regardless of the reason, this led to the reality of out-of-community care for many women. Below are thematic descriptions of care, experiences of the logistics of arranging care (specifically vis-à-vis children and partners) and the financial implications of leaving the community to give birth.

Experiences of Medical Care
Participants in this study conveyed a range of experiences of giving birth in referral communities. Overall, positive experiences were more qualitatively correlated with referral communities that were close to participants' home community, while negative experiences were likely to be reported when the distance between the local and referral community was substantial. Further attributes involved in a positive out-of-community experience included access to care providers in the referral communities. As one participant noted:

> *I'm really happy with how things are. At first I thought [referral community] would be quite a bit a way but really it wasn't that bad to like get back and forth. And whenever I needed to see [Doctor], I could easily get in like they always would squish you in. She's really good for that…just getting you in* (Town 1 -- 010).

Positive experiences were also related to the length of time spent away from home; the shorter the stay, the more likely it was that the experience would be positive. This may have, however, resulted in strategies to minimize time spent in the referral community including planning the date and time of birth through elective induction and scheduled Caesarean sections. One participant resorted to the former strategy to quell her anxiety about leaving her family and community for an extended period.

> *When we went down, I met a doctor. [Doctor] said: "OK. What can I do to help?" 'Cause I was really really upset at that point and I said: "If you can just give me a date to induce me and I'll just come down and you can induce me and I can go home"* (Town 4 -- 011).

Several others recounted considering an elective Caesarean section in the absence of medical indications. As one participant noted:

We even considered just a planned C-section so that we could know the dates, go down there the day before have the baby do the three, four days in the hospital and come home and forego a lot of this, but then you're looking at recovering from major surgery with a newborn and…a three year old so you know I just didn't want to go there so they're going to try it this way (Town 4 -- 012).

For another participant, the decision to have an elective Caesarean section instead of attempting a vaginal birth after a previous Caesarean was motivated by the convenience a Caesarean section would afford.

Interviewer: So then you ended up having a C-section and you got pregnant with your second baby…
Participant: I had just decided I was going to have a C-section with that one, because again the travel, the waiting, the hotel. This time, well she was going to be born in [referral community], but it was more convenient to be able to know when I had to go down (Town 4 -- 004).

Another participant commented positively on the consequences of having a Caesarean section in relation to travel.

Like, again I worked until the day before I went down so…it was just a natural progression to go have a baby and come home. I was home in three days and…it was the third time around with Caesareans. I knew what to expect (Town 4 -- 004).

For some participants, however, even access, timing and continuity did not compensate for the inescapable inconvenience of having to travel for care.

I did all [my prenatal visits] in [referral community]…It was [a hassle]. It most definitely was. The only way I could do it is I live here with Mom and Dad. My car is parked in the driveway not running, but so I mean I use their vehicles put gas in their car and go out there (Town 1 -- 007).

Experience of Non-Medical Care
Many participants recognized that the non-medical aspects of choosing where to go and organizing their care in the referral community were limited for those with restricted financial and other resources. For the participants in this study with limited resources, actual choices were curtailed. One participant recognized this when she said:

And it's the poorer women that sort of suffer the most. Because…they're having to make the choice to stay up here; well it's not a choice for them. They're having to stay up here and then you know having to risk the mad dash down island just because they don't have the money to stay there. And they're away from all their support (Town 4 -- 012).

Securing appropriate accommodation in referral communities was an issue for most participants, especially those with other children. Many lamented inadequate accommodations and noted how they led to increased stress and anxiety during the final phase of pregnancy. Many women expressed the wish — and need — for community-supported accommodation in referral communities.

> *I think it would be really nice…probably top of my wish list would be have somewhere for women to go…'cause I tell you when you're nine months pregnant and for me OK it was August and it was hot, and I was big and fat and I had two teenagers and…a one and a half year old you know to be stuck in a hotel room with these people — I would have killed somebody. I would've you know. But just to go and have somewhere where they can relax; the kids can go and watch TV, you can cook dinner…even just a couple, because really there's not that many women all going off at the same time to have a baby, but it would be really nice to see something like that for sure* (Town 2 -- 016).

Family Issues While Away
Parity, or the number of children a woman has had, was related to the level of stress she experienced around leaving the community to give birth. Many participants had this insight after having their first child away from home. As one noted:

> *With a second baby, I think it might be a little bit more difficult being away from home I think because we'd have to…figure out what we'd do with [daughter] in the meantime and being away from home is difficult* (Town 4 -- 005).

Those who experienced the birth of a subsequent child recognized the actual differences in experiences for them, their partner and the process of becoming a family.

> *And…it was such a different experience for him than with [daughter]. I mean, when we had [daughter] he could come to the hospital for two hours and leave the big kids with my mom and dad or his mom and dad and he could just come and watch a movie and hold the baby and you know do some bonding and this time it's been a bit of a longer process* (Town 4 -- 011).

Participants who already had other children had to deal with logistical arrangements regarding their care during the time leading up to the birth. When children stayed behind in the local community (usually due to school and other social commitments), arrangements for child care had to be made. Even when such arrangements were made, the effect of leaving a child behind was far reaching for most of the participants.

> *Interviewer: How did it go with [son] staying here?*
> *Participant: The most stressful night of my life…. That was the worst thing. Yeah and that's why I wanted to come home early* (Town 1 -- 010).

Conversely, when children accompanied their mothers or parents to the referral community for the birth, challenges were faced in meeting their physical and social needs.

> *[When you are in the referral community], there's just McDonald's and all that crappy food you end up eating, because who has the time to cook in a hotel room...we could only afford...a room so it had...two beds and a fridge. It didn't have a kitchen in it or anything like that...so the kids are down there; they're eating junk food; they're staying up to all hours of the night; they're all sleeping in one bed...there's nothing to do in a hotel room, so you're out entertaining them all day which is highly energetic and my poor husband's all alone in a hotel room with four children (Town 4 -- 011).*

In many instances, partners were not able to come to the referral community until the birth was imminent due to work commitments. This usually had negative implications for both the birthing woman and other children. One participant recounted the struggles she had to answer her toddlers' questions about why his father was not able to be with them.

> *And why Daddy's not there. And why he can't come home at night. I mean as it is now every day starting at about one o'clock he's asking what time it is and when is Dad going to get home. And that it's a big help for me as well 'cause after dinner Dad does take him, and they'll go outside or you know they'll go and do something and I'll have an hour or two...that me time is pretty important, and I'll be losing that being down island too and you know the final two weeks when you'd like it the most (Town 4 -- 012).*

When partners were able to accompany participants to the referral communities, however, other — usually financial — challenges were faced with direct implications on the experience of birth.

> *You know it's costing us money down here. My husband's not working, the kids are out of school. You know my mom has a life outside of mine, so there was all that kind of added stress as well worrying about that let alone like you said being 41, 42 weeks pregnant and being away (Town 4 -- 002).*

Most participants recognized the difficult situation their partners faced, trying to juggle the needs of an older child or children with the desire to connect with the new baby and support the new mother post-partum.

> *He had all this stress of waiting and not knowing what was going to happen and then having the kids there and trying to juggle bringing them to the hospital and finding something to do with them and having them awake at six and asleep at 11 o'clock at night, and tired and cranky and yeah, and you know all he wanted to do was come and sit in the hospital and hold the baby and he didn't really get to do that (Town 4 -- 011).*

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Resentment at Needing to Leave Local Community
Beyond the arrangements and consideration of logistics, many participants in this study expressed the sense that having to leave the community to give birth was fundamentally wrong.

> *We are not supposed to be travelling all over the place to have babies and going driving down island at nine and a half months pregnant. That's a long drive to [referral community]-- especially when you're pregnant* (Town 4 -- 011).

Financial Implications
All participants who left their home community to give birth commented on the financial implications of doing so. Costs incurred were not limited to transportation, food and accommodation, but included incidental costs such as phone calls back home and the desire to take advantage of the resources afforded by being in a city — resources that were often not available in their home community. One participant recalled the costs incurred in keeping her partner and family informed while she waited to give birth.

> *Oh yeah like all, of course, you call your boyfriend every day to tell him what's going on and your family and yeah I think we did over $200 on the phone bill just talking to everybody saying this is you know she's born and it was expensive that's for sure. It would have been more if we'd had to pay for the hotel room. 'Cause that's two weeks of hotel* (Town 2 -- 002).

One participant who did have access to financial resources suggested that even for her and her family, the costs were nearly prohibitive.

> *Just let me point out as a family that can afford to go down nobody can afford to go down, because they ask you to go two weeks prior to your due date and you know if you go over at all that's a large expense so even if you're able to afford it it's still stretching the budget so that's, you know. I always think that nobody can afford to go down island for three to four weeks in a two to four week period of time* (Town 4 -- 002).

Diminished Local Obstetrical Care

For many women in this study, the delivery of obstetrical care does not meet their needs. Unmet needs precipitated consequences for the women, for their current course of care, their choices for future pregnancies and for the larger community. One strategic consequence was the propensity for some women to exert control over the date of the birth of their child through elective induction and Caesarean section to minimize time spent in the referral community. Other consequences included having an unassisted home birth, or delaying childbearing and leaving the community to access better care. One participant, referred to the latter option.

*I might move…. Which is a real sad statement. I wouldn't want to do it
again.…It's the pre-natal care.…I think I would move…yeah I don't have a
whole heck of a lot of faith in the medical system especially with some of the
decisions that have been made locally* (Town 4 -- 006).

Another made the retrospective comment that she and her partner would not have had a
child had they known there was no local access to care.

*If we had known that we were going to have to go away…there's no way that
we would have had another baby until they brought maternity care back to
[my community]* (Town 4 -- 011).

A small minority of participants in this study talked of considering, hearing about or
undertaking an unassisted home birth in their community. In contrast to those having
unassisted births due to political or ideological motives, and within the context of other
options, women in this study who undertook it did so out of a sense of the lack of
alternatives. One participant recounted the experience of a friend.

*Another friend of mine, it was her second child; low risk first time was
no problem, she chose to stay up here and have a home birth. Her doctor
refused to see her anymore when you know when she sort of expressed that to
him so you know she's even more out on her own then. Then she's got a lack
of maternity care just because the doctor's up here don't agree with…what
her choice was* (Town 4 -- 012).

Long term, participants recognized systems level consequences to the lack of local care.
Some commented on how the lack of access to local care precipitated relationships to care
providers outside the community that would endure even if the local situation changed. One
participant travelled outside the community to receive care from a registered midwife and
noted that she would continue to do so in subsequent pregnancies due to the strong
connection she had made with her.

*I think if there was a midwife up here then…it would be hard 'cause I feel
like now I've established this connection with my midwife and…I really
enjoyed the experience of going down there…and I like the idea of the same
person being involved in all my children's births…so now if there was a
midwife up here it'd be a really hard choice. I'd be, I don't know. I probably
I don't know* (Town 2 -- 012).

Likewise, this was the case for many other participants who established relationships with
physicians in referral communities.

*Quite honestly I'd stick with…like my doctor in [referral community]. I'd
stick with her 'cause I just really like her. The doctors here, I'm not sure
about quite honestly, so I wouldn't want to put myself in that position to be*

*with them in the hospital here. But if my doctor did come here and say oh I'll
meet you here or something then yeah definitely* (Town 1 -- 010).

Integrating Care

Women in this study had a clear sense of both the limitations of the current organization
of care in meeting their obstetrical needs and the changes needed to have these needs met.
Thematic among these changes was the desire for choice in care, specifically through
access to midwifery care. Although there were no registered midwives in any of the study
communities, many participants sought midwifery care in referral communities, sometimes
starting with prenatal visits early in the pregnancy. Some participants who could not feasibly
leave the community for care developed innovative alternative plans that attested to their
level of commitment to midwifery care. For example, one participant attempted to recruit a
midwife to her community.

> *But still I was determined just to have it at home, so I got a hold of a midwife
> and thought well OK. Actually, what I did first, I put my word out onto B.C.
> Midwifery Association. Is there anybody going on a holiday around [date]
> wanting to come to [my community] and I'd be willing to fund raise to pay
> for the trip to have somebody come here and birth my child* (Town 4 -- 006).

Women who did establish a relationship with a registered midwife in a referral community
developed several strategies to mitigate the challenge of travelling to the referral community
for prenatal care. These strategies included checking in by phone, extending the time
between prenatal visits to five weeks instead of the standard four weeks, and arranging visit
times that were conducive to travel schedules, such as on weekends. If early prenatal care
was received within the local community, participants often faxed chart notes to their
midwife. One participant summarized the strategies she employed.

> *You can talk on the phone or you can extend it from instead of once a week to
> every 10 days or that sort of thing. I mean I was able to incorporate it into
> another trip down island and that sort of thing so for me and because I'm one
> of the fortunate ones who can afford to go down island not that I think you
> can but you know what I mean like it's not, it's not impossible to do it right
> so I would just incorporate it into other things we were doing. You know,
> we'd go up to [referral community] for any holidays and she was wonderful.
> She would see us evenings and weekends so my husband was able to be a
> part of it, because he's in camp. He comes out on the weekends. He's gone,
> he leaves Monday morning like early 4:30 in the morning, and he comes back
> at 7Friday night so to be part of the whole process is impossible if you're
> seeing your GP[general practitioner] for your prenatal care* (Town 4 -- 002).

When participants did secure midwifery care outside of their community, they experienced a
range of support from their local care providers, some of whom continued to be available for
care and some of whom did not. One participant recounted the collaborative approach her
local physician took in working with her midwife in the referral community.

[My doctor] supported [my choice to have a midwife]…he's from South Africa so that's how they got their training…through midwives….They seemed to be fine that if something was happening and I needed to see somebody locally then they would consult, so they seemed to be quite fine with working with each other…but yeah so I did up until the five months and then once I made the move I made like completely made the move for all the prenatal, but still would see him if there was anything happening with, you know, like he was our family physician right (Town 4 -- 002).

Others encountered resistance from their local providers to be available for prenatal care due to provincial funding arrangements that force a woman to either see a midwife or a physician, but not both for routine prenatal care.

I said well can I just come in for a checkup and he says no you can't, because once you start seeing a midwife they get all the funding to delivery… And I'm like what the hell is that? You mean to tell me that if I can't afford to go and take a trip you're not even going to make sure that everything is going OK? …That's a real problem…when you have a desire to see a midwife…they're not willing to have a midwife up here. [I was] real pissed off about it obviously and then on top of that you are penalized, because you choose to have a midwife and you can't afford to keep going back and forth. So we're really in a pickle up here and I really experienced that (Town 4 -- 006).

When collaborative care between local physicians and midwives in referral communities was not forthcoming, the consequence for some participants was a lack of prenatal care due to financial and logistical challenges in leaving the community, especially toward the end of pregnancy when the number of appointments increased. As one participant noted:

I was getting closer to my term and I was having to go every two weeks. It wasn't even every week yet, but it was coming up and I hadn't been to the doctor; I hadn't been to my midwife in quite some time 'cause I was really broke (Town 4 -- 006).

Desire for Doulas

In addition to midwifery care, several women in this study noted their interest in doula care for both local birth and birth in referral communities. In the former instance, participants felt the extra support during labour would augment the nursing support which may or may not be continuous, depending on patient load. When birthing in referral communities, participants saw the advantage in having additional support.

We're looking at getting a doula, because depending on when I go into labour and where [my husband] is, you know, it could take him up to eight hours to get down there which could be too late so we're getting a doula so I won't be by myself (Town 4 -- 012).

Issues Highlighted by Aboriginal and First Nations Women

Many Aboriginal and First Nations women participated in this research through interviews and focus groups. The importance of local birth conveyed through their narratives was striking in its richness and also in contrast to non-First Nations participants. The difference in experiences between the two groups lay in the importance of kinship and community ties. Although many non-First Nations participants had strong ties to their community and some had historical connections that were multi-generational, the interwoven nature of life experiences between the Aboriginal and First Nations participants and their immediate and extended family members set them apart.

> *Taking into account just the relationship that you create with somebody that is here rather than [in referral community] and then of course, obviously, the community support. That was huge for me, and it was in my experience, it was the most important and hence my decision. And there are just so many people that are here that have like, community effort. Our culture, our First Nations culture, is about community and all the supports* (Town 4 -- 006).

Emanating out of the importance of the community in birth was the desire among many Aboriginal and First Nations participants that their children be born on traditional land.

> *Yes because his heritage here. [Name] is half Tsimshian and half Haida and it was really important to have him on island where, you know, where his family is* (Town 2 -- 007).

Other observed differences between the experiences of Aboriginal and non-Aboriginal women were a product of the convergence of social determinants that had an impact on the experience of birth, including diminished financial resources and socially complex situations. Although rural Aboriginal and First Nations women receive financial support through travel subsidies when they need to leave their communities for medical care, including antenatal care, the support received is for the women alone and does not account for the costs associated with bringing — or leaving behind — family members, such as other children or parents. In some instances, this led to a sense of curtailed choices, the consequences being either leaving the community at 36 weeks for the referral community but returning before the birth of the child or total non-compliance with the recommendation to leave. The latter was the case for two participants in this study, one of whom planned a (professionally) unassisted home birth. She asked friends to attend the birth and provide support, one of whom turned to elders in the community for advice. At this point the elders were forthcoming with information on traditional practices that quelled the concerns of the support people.

> *Two people were really nervous. One of them was nervous enough she wasn't willing to take that risk and that was fine so she backed off and the other one was really nervous and she went and spoke with…some elders, some of her own like her teachers and some of the elders, and they shared with her some of the traditional practices of traditional midwifery you know before the doctors came. And so she said she was willing to take that as long as she*

> *trusted that I was telling the truth that I was feeling in really good health. So we went ahead with it we went ahead* (Town 4 -- 006).

The participant went on to deliver her child at home, without complications.

Summary

Birthing women who participated in this study conveyed an understanding of the realities of rural obstetrical care in a time of diminishing resources. These realities included a sense of stress related to women's uncertainties around the specifics of care, difficulties in securing a continuous care provider, and the financial implications of leaving their community for care. Further themes within the narratives included participants' recognition of the importance of birth in a community, their desire for local birth, a consciousness around risk and risk assessment, and recognition of their geography and the attendant consequences for access to care it precipitated. Many women in this study expressed a desire for midwifery care. Aboriginal participants articulated different challenges around access to care and the implications of lack of local access.

Removing birth from a community creates significant psychosocial consequences that are only tentatively understood, but likely to carry physiological implications for low-risk women, their babies and families. Further research on rural women's maternity care needs in disparate geographic environments and among diverse cultural, religious and social configurations will enhance our understanding of rural women's needs, as will investigations into specific aspects of care, such as the relationship between stress precipitated by the uncertainty surrounding the location and circumstances of birth for rural women and adverse outcomes such as pre-term labour.

8. DISCUSSION

In British Columbia, as across Canada, many rural birthing women and their families are besieged with the challenge of giving birth in a way that honours their needs (physiological and social), values and desires around their experiences. In a growing number of locations, planned local birth is not an option due to the coalescence of structural (health services) and social imperatives (small population). In other communities, once vibrant cultures of local birth are struggling to support women and families who wish to remain in the community in spite of the apparent systemic neglect of such services and the larger oversight of the importance of birth to the integrity of rural communities.

At first glance, health services researchers find themselves in the seemingly dubious position of suggesting that the trend in rural maternity health services delivery is in fact problematic. This is often met with protests by health authorities and centralized planners who point to efficient transfer protocols to secondary hospitals that are better able, surgically and professionally, to meet the needs of an array of contingencies birthing women and their infants may face. Combined with decreased birth rates in rural communities and improved road access, the current system of out migration, it is suggested, has a logic, coherence and efficiency to it.

However, we only need to probe a little further to see the fissures in the current arrangement of maternity service delivery to rural women to recognize the results of inattention and neglect to their needs, the needs of their families and the needs of care providers and administrators who endeavour to support them through their childbearing year. These fissures present themselves through data on adverse perinatal outcomes from communities that do not support local birth, regardless of where the women ultimately give birth (Nesbitt et al. 1990; Larimore and Davis 1995). They present themselves through the growing attrition rate of rural care providers willing to offer maternity service delivery that, when investigated even slightly, reveals the lack of attention to the foundation of our entire system of maternity care delivery (Rourke 1998; Hutten-Czapski 1999, 2002). And they are evident, perhaps, even through the declining birth rate in rural communities that may point to a loss in confidence of residents and the subsequent decision to delay childbearing or forego it altogether.

Where else might we find evidence to gain insight into this system in crisis? This has motivated the current investigation into rural women's experiences of maternity care within the context of the structural forces that are impinging on local service delivery. The investigation revealed a complex web of interaction between policy initiatives (or more accurately, a lacuna in policy planning), care providers' experiences and challenges, and the experiences of birthing women and their families. A coherent understanding of these experiences is the starting point for repairing the system.

The thematic presentation of our findings in this chapter challenges any doubts that our maternity care system is not in crisis by describing the salient attributes of the crisis. These attributes include interpretations of risk and the attendant need to move toward a risk–benefit analysis, the challenges of providing and receiving care in rural communities, the need for interdisciplinary models of care and the consequences of no local birth.

Challenges of Providing and Receiving Care in Rural Communities

Challenges in providing rural obstetrical care, such as recruitment of physicians, maintaining skills within a context of low volume and working toward sustainable call schedules, identified by participants in this study have all been addressed within British Columbia's policy literature. The NDP-commissioned *Dobbin Report* (Dobbin 1998) recognized the contradiction between the need for 24-hour on-call coverage in small communities and sustainable practice. *Standards of Accessibility* (B.C. Ministry of Health Services and Health Planning 2002) engaged critical mass theory to show that a community needs more than one physician to provide the services that need to be available at all times, including coverage for maternity care. In health services research, human resource needs are recognized as one of the leading concerns for achieving sustainable rural health care (Kirby 2002; Klein et al. 2002a). Difficulties in recruiting permanent medical staff to the communities we visited led to the reliance on locum care in many sites, a partial solution to sustainable health care that has significant implications on maternity care. Most locums, especially those on short placements, refuse or are reluctant to include maternity care within their scope of practice due to the lack of continuous relationships with individual women, their families, the community and specialists in referral centres. This lack of continuity — and the desire for such continuity — was the most clearly identified theme women in this study expressed. In some instances, their efforts to secure such continuity led them to seek care outside the community, care they maintained after their childbearing year, which defeated the overall intent of ensuring local access to care through locums.

The Need for Interdisciplinary Models of Care

The *Dobbin Report* posited that collaboration among colleagues positively impacts physicians' experiences as they have access to more support, a collegial atmosphere and fewer on-call duties. Physicians we spoke with who were practising in communities with active maternity services all participated in shared on-call with other physicians. Many, however, expressed willingness to work with midwives to enhance the care available to birthing women. These providers recognized midwives' potential contributions to an integrated system of local care and acknowledged their specialization in low-technology settings due to their training and practice in home birth. As noted earlier, there are no midwives working in any of the study communities we visited, reflecting a more general absence of midwives from rural communities in British Columbia. This is due to several factors including overall supply issues facing the profession, lack of appropriate infrastructure to practise and the difficulty in securing adequate remuneration in a fee-for-service model in light of low volume. Recognition of these issues, however, does not abnegate the need for practitioners and health services planners to respond to the desire that rural birthing women consistently expressed for access to midwifery care.

Consequences of No Local Birth

Participants in this study presented a cogent understanding of what is only footnoted in the academic and policy literature: the consequences of no local birthing services. Health care system consequences, such as women establishing and maintaining relationships with care

providers outside of the community, were discussed above. Other consequences had more serious implications for the childbearing women — and the health care system. Several women in each community spoke of the need for even the semblance of predictability over the circumstances of her birth due to the need to integrate her labour and delivery into the rhythm of her larger family life including children's school schedules and partner's vacation time. This led some participants to request both elective induction and Caesarean section.

The narratives of participants in this study suggested that rural women were motivated to consider asking for patient initiated elective Caesarean section to reduce time spent in referral communities and better enable scheduling. This clearly has significant physiological and health system implications, including costs. Although the topic is not well researched, current evidence suggests possible fiscal advantages in centralizing maternity care (Chaska et al. 1988). However, several health service researchers have begun to point out the deficiencies of existing cost analyses that ignore the downloading of costs to patients and communities. "In the economic analysis not only the direct costs of care but also the expenses (monetary and other costs) to the family should be considered"(Viisainen et al. 1994: 404). Beyond this is the transfer of costs from one region and system to another. Fiscal costs do not acknowledge the significant psychological and physiological costs to women.

Further consequences include women delaying childbearing until there are stable maternity care services available within the community, electing to move from the community altogether, and having unassisted home births. The latter option clearly carries significant consequences for the health of the birthing woman and her infant. Participants in this study who related experiences of having or hearing about unassisted births clearly saw few other options for their care.

Aboriginal and First Nations Women's Experiences

Rural Aboriginal women were not specifically targeted for recruitment to this study as we made the methodological decision to use communities as the unit of investigation. As a high proportion of rural women are Aboriginal and First Nations and many live off-reserve, we anticipated that this demographic would be captured through open recruiting, which was the case, and we did not disaggregate data collected through interviews with Aboriginal women and non-Aboriginal women. We recognized early on in the data collection that the experiences of rural Aboriginal and First Nations women might be different from the experiences of non-Aboriginal women. This was due to several things: the increased importance of kinship ties between women and members of their communities, especially around an event like the birth of a child, the socially complex life situation of many Aboriginal and First Nations women that puts them at increased risks for adverse health — and maternity — outcomes and the financial support available to First Nations women to mitigate some of the costs of travel and maintenance in referral communities (RCAP 1996). Based on the analysis of early data from this study, we recognized that the experiences of Aboriginal and First Nations women warranted a separate investigation incorporating a participatory methodology and community-based approach. Funding was applied for and received by CIHR's Community-Based Aboriginal Health Research program and this study is currently underway.

Risk in Rural Obstetrics

Risk is a foundational concept in obstetrics and has taken on cultural connotations which inform the attitudes and thinking of birthing women, care providers and policy makers. As presented in Chapter 3, systems of rural maternity care delivery are contingent on local physicians' abilities to screen and select uncomplicated births for local delivery and refer higher risk or complicated births away to larger, more specialized centres. The safety, efficacy and *logic* of a regionalized system of maternity care rest on the assumption that this, in fact, can be accomplished.

There is good evidence to support risk assessment in high-risk pregnancy situations, such as multiple gestation or pre-term labour. The assessment loses its predictive value when the biomedical characteristics of the pregnancy are uncomplicated as is the case in the majority of pregnancies in the population. This was recognized by many of the care providers we spoke with who were still active in offering maternity care. Many were quick to point out that although they incorporated biomedical criteria in to their assessment of a woman's suitability for local birth, they also included less quantifiable influences, such as her level of commitment to local birth, understanding of risks and benefits, openness to flexibility in responding to the actualities of her situation and the support system available to her. These, as well as less tangible insights into the situation, often gave rise to an intuitive sense that informed the overall approach to care.

This approach recognizes the major shortcoming of our traditional, largely biomedical, risk assessment: the neglect of psychosocial, cultural and affective dimensions of a woman's life that have an impact on her experience of labour and birth. Although an awareness of the importance of social dynamics and context surrounding birth is beginning to emerge, there is work to be done around conceptualizing further variables that may diminish or augment risk, such as commitment to a spiritual practice or the importance of a community support in a woman's life. LeFevre et al. (19889: 692) observed that obstetrical risk indices are usually developed in tertiary care obstetric centres and hypothesized: "Since traditional biomedical risk factors are less common in a primary care setting, it may be that socioeconomic and psychosocial factors are of relatively more value in this [rural practice] setting." Clearly, the differential social implications for urban and rural women of risk assessment are significant due to limited access to resources in rural environments should advanced diagnostic monitoring or interventions be necessary.

The care providers in this study had a clear sense of the challenges and importance of risk assessment inherent in rural practice. Those who felt local birth was unsafe and withdrew support for local maternity care services in efforts to diminish risk recognized themselves to then be increasingly vulnerable when attending the inevitable unanticipated local deliveries due to the loss of local birth service expertise. The only solution to this conundrum is to ensure all rural practitioners remain current in basic obstetrical skills and recognize maternity care as an integrated part of rural practice, even in communities that do not actively support local care.

Recalibrating the Balance

As noted above, the characteristics of pregnancy currently involved in risk assessment are largely restricted to biomedical determinants while social, psychological and spiritual ones are neglected. This limited perspective is based in part on our cultural proclivity toward things easily quantifiable which in turn leads to a neglect of comprehensive psycho-social inquiry. It further presents serious challenges to issues of informed choice about planned place of birth and consent. We have little understanding of the risks of leaving the community to give birth. We naturally assume that because increased technology and increased access to specialist care is available in referral communities it must be safer. This may not be true. Furthermore, women in this study identified real risks associated with travel or being transported to access care that they wanted to weigh into their decision making. Perhaps a more useful approach would be to frame the discussion to include both the positive characteristics and values of local birth as well as the risks and include a similarly balanced analysis for birth in the referral community of a woman's choice.

Women in this study had a lived, contextually rich understanding of the importance of community. Many had left urban environments to live out their ideals of family, community and commitment in a lifestyle based on social cohesion and reciprocity. Honouring both the importance of the local, social context of birth and the attendant benefits accrued to communities by local birth was prominent for many participants in this study. As with most insights, an understanding of the importance of community was forthcoming for women who had to leave the community. The disruption of social support that evacuation during or before childbirth precipitates underscores emerging biosocial literature on the importance of such support to birth outcomes (Tarkka and Paunonen 1996; Dahlberg et al.1999; Melender and Lauri 2002).

The importance of birth to rural communities cannot be understated from both practical and philosophical perspectives. Klein et al. (2002a: 120) argued that when the centralization of maternity care occurs "without full appreciation for the consequences to the life of rural and small urban communities, serious unintended results can occur." The authors go on to suggest a cascade of adverse consequences for mothers and their babies, and the wider community when local birth is no longer an option, starting with women leaving the community to give birth and the attendant consequences of this (increased frequency of small, premature infants and maternal/newborn complications), which ultimately increase health care costs. The health human resources infrastructure begins to crumble leading to consequences in access to other services such as well-woman gynaecological care. Remaining physicians succumb to the stress of excessive on-calls and retire or relocate, leaving the community scrambling to find replacements. Ultimately, emergency and surgery services collapse, because of the dearth of available care providers for on-calls, making it difficult for businesses to recruit employees to the community. Many residents question the vibrancy and sustainability of the community and choose to relocate, if they can. Klein et al. (2002a: 121) concluded:

> The community itself becomes dysfunctional and unstable. Too late, it
> is realized that maternity and newborn care are lynchpins for sustainable
> communities, medically, socially and ultimately economically.

Many steps in this hypothetical trajectory were born out for the communities in this study. But what if, based on the needs and experiences of the care providers and women we spoke with, we recast the hypothetical trajectory to capture the consequences of the concerted effort of policy makers to support rural maternity care actively?

- Regional health authorities, supported by centralized planning, institute a comprehensive, inter-jurisdictionally consistent policy to support care providers and women in rural environments (including supporting the professional and remuneration needs of interdisciplinary care teams).

- Increasing numbers of care providers decide to reintroduce maternity care as part of their rural practice.

- Increasing numbers of women, motivated by the support of their care providers, decide to stay in their communities to give birth.

- Care providers' (physicians, nurses and midwives) skills and confidence increase, leading to positive outcomes.

- Recognizing the positive outcomes, obstetricians in regional referral centres become increasingly supportive of and available to physicians in rural communities, contributing to increased positive outcomes.

- Recognizing the vibrancy and logic of rural systems of maternity care, health authorities, centralized planners and professional associations decide to further support rural maternity care through training GPs to do Caesarean sections, provide anaesthesiology services and increasing midwives' scope of practice to include activities, such as vacuum extraction.

- Local maternity services become the focal point for burgeoning, local health services, which meet the needs of community members and define the community as a highly desirable place to live.

When local maternity services are recognized as the lodestar for the social and physical health of families and communities that they are, reallocating resources and energies to support them becomes not only a logical and sensible course of action but a moral imperative.

Creating Sustainable Rural Maternity Care Services

The consideration of rural participants' experiences of maternity care within the context of B.C. health policy reveals congruence between challenges policy makers have recognized and challenges care providers and women face. These include practitioner retention and recruitment, provider maintenance of skills and confidence in the context of low volumes of births, and the need for an effective regionalized maternity care system to support rural deliveries. Policy documents such as the Seaton report intimate that lack of local care may

be associated with emotional and financial stress, family instability and marital instability during pregnancy, which may increase the risk of premature low birth weight babies. These intimations are consistent with the literature from rural studies in the United States (Larimore and Davis 1995; Nesbitt et al. 1997). Transporting and caring for premature infants in neonatal intensive care units is expensive, and if previous evidence is born out in contemporary rural Canada, there is likely to be a strong fiscal and quality-of-care imperative to re-establish and sustain rural maternity care services in the near future. It is likely to be less disruptive to maintain those we still have than face resurrecting or renewing services in the coming years.

It has been pointed out by leaders of the Society of Rural Physicians of Canada that it is not that anyone is determined to dismantle the systems of rural care but rather that there is a lack of the active support needed to maintain them. We need a comprehensive strategic plan and policy for rural maternity care rather than a system of piecemeal decision making in response to critical incidents or ad hoc fiscal or administrative imperatives.

Relocating rural women to regional referral centres for labour and delivery is at best only a short-term solution, as the issues that have contributed to destabilizing local maternity care in the peripheral communities will, in turn, destabilize small regional facilities. In British Columbia, we already have instances were large regional centres are unable to maintain obstetrical services for short periods of time due to staffing problems.

We need to revisit the standards of access to services written for rural British Columbia. A two-hour standard based on air travel for access to maternity services, if applied with enthusiasm, would close most of the small rural maternity services in rural British Columbia. Rural parturient women will not be getting into small planes to fly to the nearest referral hospital. They will be driving through mountainous, seasonally very challenging, road conditions and they will be birthing en route.

Finally, a sustainable rural maternity care system requires a cultural acceptance of risk as a comprehensive, multi-dimensional phenomenon that is both general across culture, class and geography, and is specific to individuals. Understandings of risk must be both an embodiment of the likelihood of a multiplicity of biomedical, physiological, social, psychological and spiritual outcomes in light of the evidence *and* an acknowledgment of the inherent uncertainty of birth and life including an appreciation of the ambiguity they bring. Until we step away from efforts to control for every possible biomedical contingency, recognize the complexity of influences on birth outcomes, and celebrate chance as part of the mystery of life, we will be compelled to create systems of care that address physiological, but overlook psychosocial and spiritual needs.

9. RECOMMENDATIONS

The working recommendations outlined below arise from the results of the current research and the reviews of the epidemiological and policy literature presented in chapters 2, 3 and 4. We took an original set of recommendations elicited from this comprehensive review back to research participants in three of the four study sites and have now incorporated their feedback to develop the following list of recommendations. This process of member-checking[17] was invaluable for the verification, refinement and addition of ideas contained in our analysis of the data. As chapters 3 and 4 illuminate, despite the specific geographic focus of this study, the findings and recommendations are relevant to other Canadian jurisdictions experiencing similar challenges to the provision of rural maternity care services.

The results of this comprehensive review make evident the need for an ongoing organized and systematic trans-disciplinary program of research on rural maternity care. This will provide the evidence needed to address the key questions that will inform new initiatives or changes in existing policy directions. The organizing questions are:

- What are the barriers to sustainable rural maternity care?

- How can we address these barriers through policy and practice?

These questions also provide a focus for specific recommendations pertaining to health systems and care provider issues. The recommendations presented below are based on the following six guiding principles for rural maternity care service delivery.

Guiding Principles

Maternity care health services should:

- meet the needs of rural women and families;
- meet the needs of rural maternity care practitioners by providing incentives and support that appropriately acknowledge the level of responsibility they carry and the skills they need;
- be structured based on numbers of birthing women, travel time and parity of the population within a community or catchment area;
- implement and evaluate new models of care supporting inter-professional collaborative practice;
- encourage more multi-disciplinary research into the safety and effectiveness of rural maternity care; and
- be recognized as an index service within the community with implications on the availability of other health services (e.g., well-woman gynecological care).

Suggested Recommendations

Community Partnership

1. Establish and maintain a participatory process to generate solutions in partnership with rural communities including care providers, administrators, women, families and other community members.
    *   Integrate the participation of women and other community members with providers and planners through community forums.

2. Facilitate a community process to acknowledge and accept the risks associated with birthing in rural communities.

Health Care System Issues

3. Establish and sustain maternity care services in rural communities based on numbers and parity of birthing women and the evidence for optimal population outcomes.
    *   Acknowledge the degree of isolation, transport issues, the social context of community and economic efficiencies.

4. Develop support for women who must leave their communities to give birth through:
    *   appropriate accommodation for women and their support system in referral communities;
    *   recognition of the importance of social support for women leaving their communities (funding for multiple escorts based on needs criteria, e.g., nulliparity);
    *   funding support for non-First Nations women who must leave their communities to birth due to pregnancy complications or lack of local access; and
    *   ensuring there are Aboriginal liaison workers at referral hospitals.

5. Models of remuneration:
    *   Recognize the increased responsibilities of rural practice (lack of local consultant backup).
    *   Refine funding to create parity between GPs and midwives.
    *   Differentiate payments according to parity (increased monetary support for nullip and VBAC deliveries) *or* funding based on length of active labour.

6. Continuous transparent process of monitoring outcomes by establishing and maintaining an open process of feedback regarding outcomes at hospitals, and at catchment, regional and provincial levels.

7. Optimize use of available technology in rural settings by establishing criteria for evaluating and applying technology to rural settings (e.g., ultrasound technology/teleradiology vs. sending women to referral communities for routine ultrasounds).

Service Delivery Issues

8. Establish new models of collaborative practice.
    - Identify barriers to inter-professional clinical collaboration (e.g., midwives/GPs – home births) recognizing that midwifery in British Columbia is based on the principle of autonomous practice.
    - Pilot-test new collaborative practice models.

9. Ensure accessibility of prenatal care for rural women.
    - Remove barriers to collaborative, interdisciplinary prenatal care (e.g., restrictions on shared care between midwives and GPs).
    - Explore innovative models of prenatal care and education (e.g., group visits).

10. Ensure rural women can access prenatal education recognizing the importance of prenatal education in the planning process around rural delivery and the challenges of providing prenatal education faced by rural communities

Provider Issues

11. General practitioner surgeons and anesthetists should be supported through policy initiatives recognizing their value and contribution to rural communities through a system of training and skill maintenance, certification and regulation, and infrastructure support.

12. Provide continuous professional development for local caregivers (on site) — interdisciplinary workshops.
    - Develop a formula for maintenance of maternity care skills for rural providers (e.g., identifying the need for refresher courses based on number of days since last delivery).[18]

13. Recognize the importance of community support for parturient women during the childbearing year through doula training programs and the acknowledgment of the contribution of informal labour support.

14. Work with regulatory and training bodies (CPS, CMBC and SOGC) to actualize the contribution midwives can make to rural maternity care.

Further Research

15. Involve representatives from all community groups (administrators, care providers, consumers and others) in research pertaining to local service delivery through an authentic participatory process.
    - Specific topics we need to know more about include the efficacy and safety of GP surgeons undertaking Caesarean sections and other models of care provision.
    - Establish more effective methods of implementing and disseminating results of research and current understandings of best practices with rural communities.

16. Reassess the efficacy of risk assessment when applied to rural environments to include a consideration of psychosocial characteristics that mitigate or contribute to risk in the assessment, and consider other possible variables that weight into an equation of risk–benefits.

APPENDIX A: MAP OF FOUR STUDY SITES
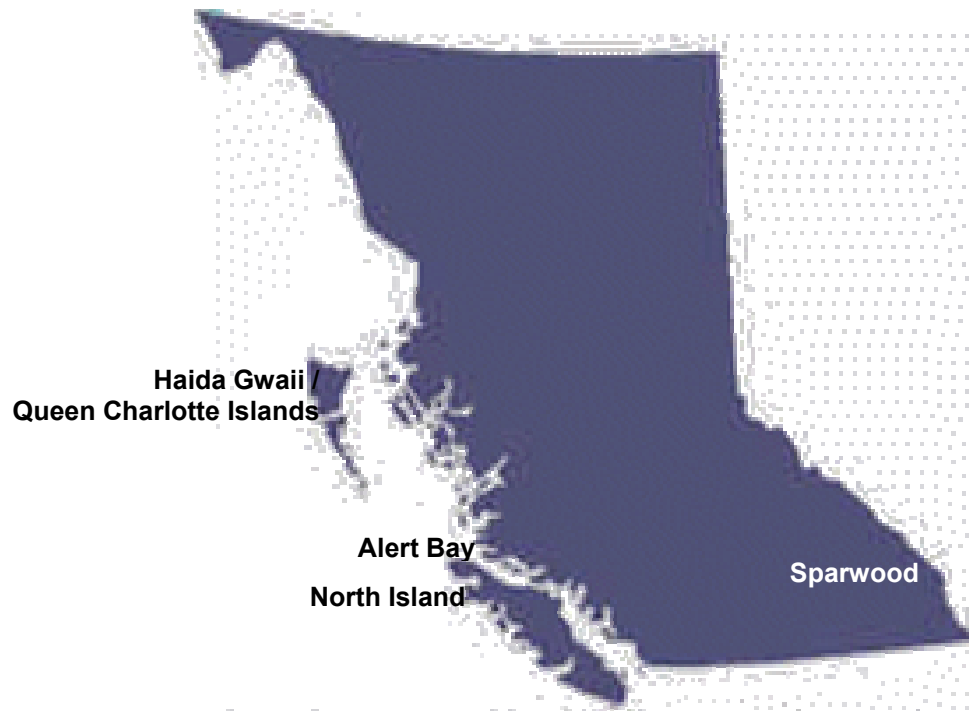
Alert Bay, British Columbia

Community Information
The history of Alert Bay dates back almost two hundred years. On initial discovery of the small island, a thriving fishing industry developed. Access to the sea was easy and the Bay provided shelter for fishers and their families. A thriving canning industry soon developed. As Alert Bay quickly grew, a school and community were established to house the many families involved with the fishing industry; included among these families were many First Nations people. In the mid-1880s, a sawmill was built and employed mostly First Nations men. In the late 1880s a residential school was built primarily to teach carpentry, furniture making, boat building, animal husbandry and regular academic school work, to Aboriginal boys. By the early 1990s, both fishing and forestry were dominant industries on Cormorant Island. Alert Bay had also become a thriving community; the central hub from Campbell River to the head of Vancouver Island, and the site of the only hospital for the whole of the North Island.

Today Alert Bay is a very different place. Alert Bay is home to 583 people (Statistics Canada 2001). It is a small fishing community only accessed via a 45 minute ferry ride from Port McNeill. Alert Bay is home to the 'Namgis (or Nimpkish) First Nations. The 'Namgis formerly used the Island as burial grounds and as a seasonal home. While residents do fish in Alert Bay, the industry has changed drastically from its booming days of the 1880s. The canning industry no longer exists, and fishers provide stock to small, family-based businesses. Forestry also no longer functions as an industry in Alert Bay. Economically, Alert Bay struggles relying on a fledgling tourist industry.

Despite the economic hardships of Alert Bay, the 'Namgis First Nations Band is organized and thriving. A beautiful cultural centre has been built and displays a large collection of artifacts and a detailed description of both the history of the area and the band. The former residential school has also been transformed and is now used as a congregation spot for social and recreational activities. A strong sense of place and commitment to place is emphasized by all Alert Bay residents. As local birthing capacity no longer exists on the Island, many residents are negatively impacted by the inability to deliver their babies at home. While travel to the neighbouring Port McNeill may not be an economic hardship to some parturient women and their families as the trip is paid for by the 'Namgis Band, the social consequences of not having the ability to deliver their children in Alert Bay is very difficult for some mothers. While the relative isolation of Cormorant Island prevents several of the local physicians and nurses from feeling safe providing labour and delivery services to women, there is conflict among most professionals about the complete withdrawal of maternity care from the Island due to the importance of local birth for First Nations women.

Health and Health Care
Alert Bay is part of Local Health Area 85 (Vancouver Island North) within the larger Vancouver Island Health Authority (VIHA). In 1909, St. George's Hospital was the first hospital built for the North Island. In 2002, the Cormorant Island Community Health Care

Centre was built to replace this older structure. The newer 14-bed facility (four acute care and ten multi-level care beds) did not include a labour and delivery room. A local physician fought to have oxygen installed in the physiotherapy room so the room could serve a dual function for both physiotherapy and labour and delivery patients. The Cormorant Island Community Health Care Centre serves the population of Cormorant Island, Malcolm Island and small towns on the mainland. There is one Health Centre on the Island ('Namgis Health Centre). At the time of data collection (July 2003) there were three physicians in the community; however, one was expected to depart at the end of August 2003 leaving only two full-time physicians.

Labour and Delivery
In May 2003, the VIHA suspended labour and delivery services in the whole of the Mount Waddington area (including communities of Alert Bay, Port McNeill and Port Alice).

Table 2: Location of Births to Alert Bay Residents

Year	Local Delivery	Referral Centre Delivery	Grand Total
1996-1997			
1997-1998	5 (+1 in Port McNeill)	0	7
1998-1999	3	2	5
1999-2000	6	10	16
2000-2001	3 (+1 in Port McNeill)	19	23
2001-2002	5	11	16

Note:
*Please note the fiscal years before 2000-2001 do not contain data from all hospitals in British Columbia.
Source: B.C. Reproductive Care Program (2003).

Sparwood/Elkford, British Columbia

Community Information
Sparwood is located in the Elk Valley, at the south-eastern corner of British Columbia, 18 km from the Alberta border. The District of Sparwood was incorporated under British Columbia's Instant Town Legislation October 6, 1964. At the heart of the Elk Valley, Sparwood developed from three existing town sites: Michel, Natal and Sparwood. While all three town sites were surrounded by coal mines, Sparwood was the furthest removed making it the least affected by air pollution caused by coal dust. By late 1966, Michel and Natal were devastated by coal dust, which resulted in the elimination of each as communities and the subsequent expansion of Sparwood. In 2001, Sparwood had a population of 3, 812. Thirty kilometres east of Sparwood, Elkford has a population of 2,589 (Statistics Canada 2001).

Sparwood and the surrounding area have always been dominated by resource extraction activities. The Sparwood Basin contains the largest reserves of high-quality coal in British Columbia, and as the dominant industry, over 80 percent of the population works in the mining sector. Despite the global economy placing intense pressure on Canadian coal extraction companies, Sparwood has fared amazingly well. Increases in production, the

lack of layoffs and strike actions, and rising home prices have all been characteristic of the Sparwood economy over the past five years. This good fortune has assisted the overall well-being of Sparwood residents.

The annual average family income for Sparwood residents is $62,521, which is considerably higher than the annual average family income for British Columbia residents at only $52,840 (Statistics Canada 2001). The average income for married residents is even higher at $66,307; again considerably higher than the British Columbia average for married residents of only $60,278 (Statistics Canada 2001). As over 75 percent of the Sparwood population is married, this finding is significant.

Due to the uncharacteristically high wages of Sparwood residents in comparison to British Columbia standards, and due to the upbeat nature of the local economy, most Sparwood residents did not feel commuting to outside towns to seek maternity care services was stressful. The town of Fernie, British Columbia where the majority of Sparwood residents access maternity care services is only 30 km away from Sparwood. Most Sparwood families own two vehicles and find the short drive to the neighbouring town is not a burden. The cost of gas, or even the potential to have to purchase lunch while out of town did not seem to bother most Sparwood residents as, economically, the majority of townsfolk were doing well.

Unlike the majority of resource-based towns in British Columbia, the economy and dominance of the coal industry in Sparwood has been a positive attribute. As such, the majority of local residents did not seem to be inconvenienced by the short distance needed to travel to access health services, including maternity care services, for prenatal, labour and delivery, and postnatal care.

Health Care
Sparwood is in LHA 1 (Fernie), within the larger Interior Health Authority. Sparwood Hospital and Health Care Centre was established in 1978. Once a 27-bed hospital, it was downgraded 10 or 12 years ago to a 12-bed hospital. It was at this time that the operating room was closed. In May 2002, acute care beds and emergency room hours were further reduced, as were lab and X-ray services. Sparwood Hospital and Health Care Centre is now only open Monday through Friday from noon until 10:00 PM, and Saturday and Sunday from noon until 7:30 PM, with no after hours on call on Tuesdays, Wednesdays and Thursdays. At the time of the data collection, there were two RNs, one LPN and three physicians, as well as two public health nurses (one full-time in Sparwood, and one part-time in Elkford). There is one medical centre and one health unit in Sparwood. Referrals of Sparwood-Elkford maternity patients are to Fernie (20 minute drive), Calgary, Alberta (239 km), Lethbridge (178 km) and Cranbrook (125 km). There are two ambulances in Sparwood which are centrally dispatched from Kamloops, but volunteer staff are not always available.

Elkford has a small health centre that operates only during the day. All emergencies are transferred to Sparwood (30 km away). Maternity care services have been taken care of by the physicians in Sparwood for the past 15 years, and Elkford residents were accustomed to travelling 30 minutes to Sparwood to deliver their babies. Elkford residents are now finding

it difficult to travel the extra 30 kilometres past Sparwood to Fernie to deliver their babies, especially in winter driving conditions.

Labour and Delivery

Obstetrical services were discontinued in 2002. Before, low-risk deliveries were performed at the Sparwood General Hospital. Key informants spoke of the issue of an aging population in Sparwood, and the resulting decrease in the number of births. One key informant said there used to be 130 births a year in Sparwood, and 80 a year in Fernie, but that now there are only 50 births a year in Fernie for the entire Elk Valley.

Table 3: Location of Births to Sparwood Residents

Years	Local Delivery (Sparwood General)	Referral Centre Delivery	Grand Total
1997-1998	24	28	52
1998-1999	17	28	45
1999-2000	14	26	40
2000-2001	12	23	35
2001-2002	14	21	35

Note:
*Please note the fiscal years before 2000-2001 do not contain data from all hospitals in British Columbia.

Source: B.C. Reproductive Care Program (2003).

Table 4: Location of Births to Elkford Residents

Years	Local Delivery (Sparwood General)	Referral Centre Delivery	Grand Total
1997-1998	9	19	28
1998-1999	7	29	36
1999-2000	5	21	26
2000-2001	2	13	15
2001-2002	2	25	27

Note:
*Please note the fiscal years before 2000-2001 do not contain data from all hospitals in British Columbia.

Source: B.C. Reproductive Care Program (2003).

The Queen Charlotte Islands/Haida Gwaii

Community Information

The Queen Charlotte Islands/Haida Gwaii consists of about 150 islands, the two largest being Graham Island to the north and Moresby Island to the south separated by the very narrow Skidegate Channel, traversed by a 20-minute ferry ride. The Queen Charlotte Islands are situated off the northwest coast of British Columbia, about 100 km from Prince Rupert, and located on the Inside Passage ocean highway serving ships travelling from Vancouver to Alaska. Ancestral home to the Haida people for over 10,000 years, Haida culture and language are still very much a part of the Islands' identity. The Queen Charlotte Islands/Haida Gwaii have a population of over 5,500 people. Queen Charlotte City (population 1,045) is

the main administrative centre. Sandspit (population 460) is the site of the original airport. Skidegate (population 743) and Old Massett (population 707) are the two Haida villages. Masset (population 926) is the main northern community, and Port Clements (population 516) is another main community (population statistics: Statistics Canada 2001). The main industries on the Queen Charlotte Islands/Haida Gwaii are logging, fishing and tourism. The Islands can be accessed with daily flights from Vancouver or Prince Rupert to Sandspit. Daily ferries also run from Price Rupert to Skidegate (approximately 7.5 hours). Ferries run three times per week in winter season and may be cancelled in heavy weather conditions.

Health Care

The Queen Charlotte Islands/Haida Gwaii are part of LHA 50 (Queen Charlotte) within the larger Northern Health Authority. Queen Charlotte Islands General Hospital runs two sites: one in Queen Charlotte City (catchment area 3,000, serving the southern communities) and the Massett site that serves the northern communities. Physicians travel from the Queen Charlotte City site to Sandspit and Skidegate once a week. The Queen Charlotte site is a 17-bed (nine acute and eight continuing) facility. Massett-site physicians travel to Old Massett and Port Clements once a week. It is an eight-bed (four acute and four continuing) facility. Visiting consultants include general surgery, ear, nose and throat, urology, orthopedic, pediatrics, dermatology, cardiology, and psychiatry. There are three full-time equivalent physicians for the Queen Charlotte City site (shared practice: one full-time, four shared) and three full-time equivalent physicians for the Massett site. During data collection (June 2003), there was only one full-time physician at the Massett site, and two vacant positions being filled by locums. There were also three certified doulas on the Islands.

Air ambulance transfers to secondary or tertiary centres usually take about one or two hours (to Prince Rupert).

Labour and Delivery

At the time of the data collection (June 2003), there was a suspension on all labour and delivery services at the Massett site. Low-risk deliveries were still taking placing at the Queen Charlotte City site.

Table 5: Location of Births to Residents of the Queen Charlotte Islands

Year	Local Delivery (Queen Charlotte City site)	Referral Centre Delivery	Grand Total
1996-1997		1	1
1997-1998	23	37	60
1998-1999	34	30	64
1999-2000	23	39	62
2000-2001	22	52	74
2001-2002	15	45	60

Note:
*Please note the fiscal years before 2000-2001 do not contain data from all hospitals in British Columbia.

Source: B.C. Reproductive Care Program (2003).

North Island (Port Hardy and Port McNeill, British Columbia)

Community Information
The North Island is made up of 16 small towns on the northern tip of Vancouver Island at the terminus of Highway 19. Port Hardy and Port McNeill were the two towns in the North Island that were chosen for inclusion in our study as they were the only two towns where local birthing capacity has ever existed (with the exception of Alert Bay which was written up separately).

Port Hardy is the largest community on the North Island with a population in 2001 of 4,574 (Statistics Canada 2001). Port Hardy was incorporated in 1966 and has the largest business community north of Campbell River due to its strategic location at the crossroads of air, ferry, highway and marine transportation networks. The economy of Port Hardy serves the mid-coast of Bella Bella, Prince Rupert, Bella Coola, Klemtu and Shearwater. The economy in Port Hardy is based on fishing (aquaculture, shellfish operations, seafood processing, and commercial and sport fishing); forestry, mining and tourism also play important roles.

Due to the resource-based nature of the Port Hardy economy, a significant portion of the working population is employed in one of the major resource sectors. This leaves the local economy vulnerable to the fluctuating forces of the global economy. In the recent past, temporary mill and mine closures, violent and lengthy strike actions, and a general sense of unstableness has dominated the lives of families employed in the resource industries. The boom and bust nature typical of resource sector driven economies has left many families uncertain of the future.

Port McNeill is the second largest town in the North Island. In February 1966, Port McNeill was the first town to be incorporated under the new Canadian Constitution. It was incorporated with a population of only 485 residents and has grown considerably into the existing population of 2,871. (Statistics Canada 2001) Prime employers in Port McNeill are Weyerhaeuser Limited, Western Forest Products, Canadian Forest Products Ltd, TimberWest, Interfor Products Ltd. and LeMare Lake Logging along with numerous smaller contracting companies making forestry the dominant local industry. Two million hectares of forested land are administered out of Port McNeill and this rich forest resource base provides a tremendous supply of timber, approximately eight percent of the total provincial harvest.

Fishing and tourism industries are also well supported in Port McNeill. As the centre of aquaculture activity on northern Vancouver Island, related fishing activities, such as salmon processing (Beaver Cove) and the construction of net pens and floats occupy local fishers. Tourism developments have been aided by the prime harbour facility and sport and commercial fishing opportunities.

Despite its diverse nature, the local economy is still struggling to keep afloat. Forestry opportunities, once dominant in town, are fledgling due to fluctuating global prices and strife between union workers and management. Strikes, layoffs, and periodic mill closures have been common occurrences within the forestry industry and have caused significant

stress and pressure for Port McNeill families. Tourism dollars are beneficial to the local economy, yet are unreliable.

In May 2003, local birth capacity was removed from Port Hardy and Port McNeill when the B.C. government instituted a temporary moratorium on birthing for the entire North Island. Now all women from the North Island must travel outside of their communities to deliver their babies, and in some cases, must also travel away from their home towns to seek prenatal and postnatal care. The economic cost associated with having to travel out of town for care is prohibitive to most families. The cost of staying in a non-local town throughout the duration of their birth experience is also prohibitive to most families. Due to the financial hardship of most families engaged with resource industries in the North Island, women are making decisions about the size of their families based on the prohibitive costs associated with having to travel outside of town for care.

Health Care
Port Hardy is a part of LHA 85 (Vancouver Island North), along with Port McNeill, Port Alice, Alert Bay, Sullivan Bay and Kingcome Inlet, within the larger Vancouer Island Health Authority. Port Hardy Hospital provides the North Island region with laboratory, ultrasound, radiology, fluoroscopy, X-ray and physiotherapy services. It is a 12-bed acute care facility, servicing Port Hardy and another 2,000 people in the nearby rural areas of Coal Harbour, Holberg, Winter Harbour, Quatsino, Kwakiutl and Gwa'sala-'Nakwaxda'xw First Nations.

There are two medical clinics and a public health unit in Port Hardy, and two dental clinics. There are two ambulances on-call 24 hours a day. Referrals are to Campbell River (235 km, 2.5 hours), Comox (282 km, 3.5 hours), Nanaimo (400 km, 4 hours) and Victoria (500 km, 5 hours).

Port McNeill is also a part of LHA 85 within the larger VIHA. Port McNeill and District Hospital was established in 1979. It is a 10-bed acute care (nine medical/surgical beds and one maternity bed) facility servicing Port McNeill and about another 5,000 people from the neighbouring communities of Sointula, Telegraph Cove, Woss, Zebellow, Tasis, Gold River, Sayward, Hyde Creek and Echo Bay. Specialists, such as pediatrics, surgery, gynecology and orthopedics, visit several times a month. There are two RNs and five full-time equivalents, and one part time physician working out of the single clinic. Travelling by helicopter, local physcicans visit the surrounding communities of Rivers Inlet, Zeballos, Sointula and Woss.

Labour and Delivery
In May 2003, a moratorium on birthing in North Island was declared. This moratorium affects the whole Mount Waddington Regional District (including communities of Alert Bay, Port McNeill and Port Alice).

Table 6: Location of Births to Port Hardy Residents

Year	Local Delivery	Referral Centre Delivery	Grand Total
1996-1997	0	1	1
1997-1998	37 (+ 1 in Port McNeill)	9	47
1998-1999	26	14	40
1999-2000	17 (+1 in Port McNeill)	38	56
2000-2001	15 (+3 in Port McNeill)	69	87
2001-2002	18 (+7 in Port McNeill)	66	91

Note:
*Please note the fiscal years before 2000-2001 do not contain data from all hospitals in British Columbia.

Source: B.C. Reproductive Care Program (2003).

Table 7: Location of Births to Port McNeill Residents

Year	Local Delivery	Referral Centre Delivery	Grand Total
1996-1997			
1997-1998	3	8	11
1998-1999	7	7	14
1999-2000	3	20	23
2000-2001	11	32	43
2001-2002	13	38	51

Note:
*Please note the fiscal years before 2000-2001 do not contain data from all hospitals in British Columbia.

Source: B.C. Reproductive Care Program (2003).

APPENDIX C: POLICY AND REPORTS INTEGRAL
TO THE REGIONALIZATION OF
HEALTH CARE SERVICES IN BRITISH COLUMBIA SINCE 1990

Government/ Commission	Overview	Key Themes
Closer to Home: The Report of the British Columbia Royal Commission on Health Care and Costs - 1991		
British Columbia Royal Commission on Health Care and Costs (Seaton Commission)	Found that health care was disorganized and suffered from a lack of short-term and long-term planning. - Reforms were ad hoc, and did not look to the future. - Policy makers were alienated from patients' experiences. - Mechanisms of accountability and reporting were poor. - Difficult to assess performance.	Central recommendation to provide a quality health care system that is easily accessible in proximity to an individual's residence — "closer to home." The rationale was based on two assumptions: - Decentralized services are attuned to communities' unique needs, and resources are directed to areas according to where they will be most productive. - Individuals are able to access services in a proximal location. Travelling will not propound a patient's health condition.
New Directions for a Healthy British Columbia - 1993		
New Democratic Party (NDP)	Envisioned increased management and delivery of health services within homes, communities and regions. Two mechanisms are suggested for regionalization: community health councils and regional health boards; 102 councils and boards are created designed to facilitate community involvement and provide a range of health services appropriate to the area in terms of demographics and geography.	Intended to preserve and enhance the quality of British Columbians' health by enabling action on the individual and community levels. It formed the basis for an extensive regionalization plan used by the NDP Government to realize its vision for highly decentralized health care services delivery.
Report of the Regionalization Assessment Team - 1996		
New Democratic Party-appointed commission	The Minister of Health temporarily suspended the regionalization process, and commissioned the report in an effort to gather more information about the implications of regionalization. The report supported regionalizing health services, but recommended altering the existing plan.	A uniform approach to regionalizing health services was inappropriate due to British Columbia's geographic and demographic diversity. To make the philosophy of *Closer to Home* function, a different approach to regionalization was needed to clarify the roles and responsibilities of health care administrators and facilitate co-operation among providers.
Better Teamwork, Better Care: Putting Services for People First - 1996		
New Democratic Party	Reorganizes the health care system in a more streamlined way that focusses on management and administration. The plan changes the number of RHBs and CHCs from 102 to 45 (11 RHBs and 34 CHCs), but intends to preserve patient flows and service availability.	To make the philosophy of *Closer to Home* work, the Ministry needed to determine the functions of administrative bodies so their operations could focus on providing a health care system rather than engaging in bureaucratic struggles.

Government/ Commission	Overview	Key Themes
Review of Governance and Accountability in the Regionalization of Health Services - 1998		
Auditor General for British Columbia	Examines the regionalization process put in place by the Ministry of Health.	Formal governance and accountability mechanisms are essential to the process of health care regionalization.
Accountability Framework for British Columbia Health Authorities - 1998		
New Democratic Party	Establishes the roles and responsibilities of health authorities in British Columbia in relation to the Ministry of Health.	The regionalization process accords autonomy to health regions, but they become accountable as a result.
Patients First: Renewal and Reform of British Columbia's Health Care System - 2001		
Legislative Assembly's Select Standing Committee on Health	The Committee recommended a more basic regionalized structure than the model put in place by *Better Teamwork, Better Care*. The Committee posited that this structure needed to give more consideration to geography and patterns of referring patients when creating boundaries.	The Committee's proposals and recommendations focus on three main themes: the sustainability of British Columbia's health care system, potential measures to improve and better manage health care services and costs, and actions to maintain and improve health services in British Columbia.
The Picture of Health: How We are Modernizing British Columbia's Health Care System - 2002		
B.C. Liberal	Implemented a more centralized plan of regionalization based on six health authorities: one provincial and five regional.	Argued that the previous, highly decentralized health care system was characterized by insufficient attention to patient care, poor planning and objectives, low accountability and inappropriate fiscal management. Advocates co-ordinated care delivery systems centralized in multiple areas throughout the province. This regionalization plan created fewer jurisdictions. Health regions encompassed significantly larger areas.
Standards of Accessibility and Guidelines for Provision of Sustainable Acute Care Services by Health Authorities - 2002		
B.C. Liberal	Outlines the criteria that health authorities must use to rationalize the acute care services they offer. Health authorities must be able to justify that the acute care services offered within their regions match their population's numbers and health care needs.	Quality and accessibility must be maintained, but administrators should also be mindful of limited resources so the framework of regionalization functions efficiently.

APPENDIX D: SUMMARY OF STATISTICAL COMMUNITY PROFILE WORK

	North Island - Port Hardy	North Island - Port McNeill	Alert Bay	Sparwood	Haida Gwaii
Size (km²)	40.8	7.74	1.82	17.7	9940
Population	4,514	2,828	583	3,812	~ 5,000
Catchment	Quatsino Winter Harbour Coal Harbour Holburg	Sointula Telegraph Cover Woss Zebellos Tasis Gold River Sayward Hyde Creek Echo Bay	Alert Bay	Sparwood Elkford	Tlell Port Clements Old Massett Queen Charlotte City Skigegate Sandspit
Distance to hospital with C-section	4 hour drive	3½ hour drive	½ hour ferry 3½ hour drive	½ hour drive	6½ hour ferry ride. Ferries run three times per week in winter season
Distance to secondary hospital	4 hour drive	3½ hour drive	½ hour ferry 3½ hour drive	2 hour drive	6½ hour ferry ride. Ferries run three times per week in winter season
Usual road conditions (winter)	Slippery and slick due to rain	Slippery and slick due to rain	Wind concerns due to reliance on ferry Ferries cancelled in heavy weather conditions Roads slippery and slick due to rain	Snow and avalanche	Ferries cancelled in heavy weather conditions
Air access	Daylight	Daylight	Daylight/no fog/no storms	Daylight	Daylight/no fog/no storms
Diversity of population	Large Aboriginal population	Large Aboriginal population	Predominately Aboriginal	Predominantly Caucasian	Predominately Aboriginal

HAVE YOU HAD A BABY IN THE PAST 18 MONTHS?

WILL YOU SHARE YOUR PREGNANCY, LABOUR, AND DELIVERY STORY WITH ME?

We are researchers from the BC Children's and Women's Health Centre. We are interested in learning more about rural maternity care and would love to speak with you.

Please call me: Lana Sullivan at **604.875.2484** before July 21st, or dial **250.974.8011, then dial 604.833.6295** between July 21st and July 25th while we are in Alert Bay

MORE INFORMATION

We believe it is very important that women have a chance to add their voice to the discussion on the future of rural maternity care in British Columbia.

We will be in **Alert Bay from July 21st to July 25th**. We would be happy to talk one on one, or to coordinate a group discussion.

You will be reimbursed **$35.00** to help cover travel and personal expenses.

Please call to arrange a meeting time.

We look forward to speaking with you!

APPENDIX F: COMPREHENSIVE LIST OF CARE PROVIDERS, LOCAL LEADERS AND ADMINISTRATORS RECRUITED

Care Providers
Physicians
Public health nurses
Community health nurses
La Leche League representatives
Head Start workers
Outreach workers
Aboriginal case workers
Social workers
Family place co-ordinators
Prenatal educators
Emergency room nurses
Doulas
Informal birth assistants (uncertified)
Ambulance workers
Locums

Local Leaders
Members of council with health profile
Health council representatives

Administrators
Hospital administrators
Health centre administrators
Public health managers
Nurse and physician recruitment officers

APPENDIX G: GROUP/ONE-ON-ONE INTERVIEW GUIDE: WOMEN PARTICIPANTS

THE UNIVERSITY OF BRITISH COLUMBIA

Department of Family Practice
Faculty of Medicine
Trilogy Building
211-2150 Western Parkway
Vancouver, B.C. Canada V6T 1V6

Rural Women's Experiences of Maternity Care in British Columbia: Implications for Policy and Practice

Principal Investigators:

Jude Kornelsen, PhD, Research Associate, B.C. Centre of Excellence for Women's Health and the Department of Midwifery, Children and Women's Health Centre B.C., 604-875-2633

Stefan Grzybowski, MD, Director of Research, Department of Family Practice, University of British Columbia, 604-875-3281.

1) What maternity care services did you have access to before and after childbirth?
2) Tell me about your experience using these services.
3) How do these services meet your practical needs?
4) How do these services meet your emotional needs?
5) Describe your experience in your attempts to access services.
6) What are the assets/resources/services in your community that promote your health and the health of your baby?
7) How satisfied are you with the quality of maternity care services for women in your community?
8) Do you think the quality of maternity care services for women in your area has changed in the last two to five years?
9) In your opinion, what are the most important maternity care services?
10) If you could change two things to promote better maternity care in your community, what would they be?
11) From where or whom did you receive your information regarding labour and delivery?
12) From whom did you receive maternity care during your pregnancy?
13) During your pregnancy, did you have access to:
   - midwives?
   - nurses?
   - specialists?
   - prenatal education instructors?
14) How would you assess the quality of care?
15) Do you think that your practitioner knew what was important to you?
16) How important was it to you to see the same practitioner during all/most of your prenatal visits?

APPENDIX H: INTERVIEW SCRIPT: CARE PROVIDERS AND ADMINISTRATORS

THE UNIVERSITY OF BRITISH COLUMBIA

Department of Family Practice
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Stefan Grzybowski, MD, Director of Research, Department of Family Practice, University of British Columbia, 604-875-3281.

A semi-structured interview approach will be taken for the interviews with care providers. This requires the use of both open- and close-ended questions. Open-ended questions ask respondents to provide their own answer to the question, providing an opportunity for them to elaborate as they wish. Close-ended questions ask respondents to select an answer from a list provided which allows for uniformity of responses. Questions that will be used include the following.

1) Tell me what your role is in the provision of maternity care to women in your community?
2) How long have you been <doing what you are doing>?
3) What is you experience of providing care?
4) What changes have you noticed? Since when? Can you describe the process of change?
5) Do you have adequate human and physical resources?
6) Do you feel adequately supported by colleagues?
7) Do you feel it is safe for more women to give birth in your community (i.e., some of the women you send out)?
8) What changes would positively affect your ability to provide a high level of maternity care to the women in your community?
9) Do you think more women would like to stay in the community to give birth?
10) Do you perceive any risks to the mother and her baby if more women were to give birth in the community?
11) Do you perceive any risks to women who leave the community to give birth?
12) What do you think the implications are for women who leave their community to give birth? For their families? Their communities?

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A semi-structured interview approach will be taken for the interviews with care providers. This requires the use of both open- and close-ended questions. Open-ended questions ask respondents to provide their own answer to the question, providing an opportunity for them to elaborate as they wish. Close-ended questions ask respondents to select an answer from a list provided which allows for uniformity of responses. Questions that will be used include the following.

> 1) Have you noticed any changes to the provision of maternity care over the last three years?
> 2) How do you think these changes have affected the women giving birth? Their families? The community?
> 3) Do you think some women have been affected more than others?
>   If yes,   who?
> 4) What kind of maternity services do you think would be best for your community?
> 5) What needs to happen to facilitate such services?
> 6) Have you noticed other changes to your community in the past three years? If yes, do you think they are related to changes in the provision of maternity services?

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ENDNOTES

[1] Designation of first author for this report was arbitrary in that both primary investigators participated equally and collaboratively in the conception, design, implementation, analysis and presentation of the results.

[2] Dr. Kornelsen's primary appointment is now with the Department of Family Practice, University of British Columbia.

[3] Grzybowski et al. (1991) and Lemelin (1986) noted that while the perinatal mortality rate may be a meaningful measurement for large population studies, it is not statistically valid in the case of a small population and thus is less useful for an evaluation of a single small obstetric practice.

[4] Also referred to as the Seaton Commission.

[5] Regionalization, as discussed here, should not be confused with what has been described in Chapter 3 as regionalized perinatal health care that provides different levels of care at different facilities (Peddle et al. 1983; Nesbitt 1996).

[6] The PHSA included at its creation the B.C. Children's and Women's Health Centre, the B.C. Cancer Agency, the B.C. Transplant Society, the B.C. Centre for Disease Control, Riverview Hospital and Forensic Psychiatric Hospital (B.C. Ministry of Health Planning 2001). The Nisga'a Health Authority, established in 1984, has been retained as an independent entity by the B.C. Liberal Government and continues to function as a separate but parallel entity. Therefore, it is technically correct to describe in total that there are seven health authorities operating in British Columbia.

[7] The North Island is made of up of 16 small towns located on the northern tip of Vancouver Island in British Columbia. Alert Bay, Port Hardy and Port McNeill are the three towns in the North Island that, up until May 2003, had local birthing capacity. All parturient mothers living in the North Island had to travel to one of these three towns to deliver their babies. As Alert Bay is one of the four study towns in this research, when we refer to "the North Island," we are primarily referring to Port Hardy and Port McNeill.

[8] We did not target our recruitment strategies specifically around race. Due to the composition of the populations of our study sites, the women participants were from various racial backgrounds. As we analyzed the data, we found that Aboriginal and First Nations women identified some issues and challenges not mentioned by non-First Nations women.

[9] A snowball technique for recruiting research participants is one where key informants and regular interviewees help identify other interviewees.

[10] All participants gratefully accepted the honorarium with the exception of one woman who declined insisting we instead use the $35 to start a fund dedicated to improving maternity care for rural women and their families.

[11] Coherence, as defined by Agar and Hobbs (1982: 285, cited in Mishler 1986), refers to the structural relationships among various segments of the narrative. It is talk "about the same topic." Hobbs noted that the determination of coherence is largely an intuitive matter and sometimes defined in the negative (through the recognition of a lack of coherence) (Hobbs 1987: 285, cited in Mishler 1986). In addition to the taxonomy of coherence, global coherence (how a particular utterance is related to the speakers' overall plan) and themal coherence (how utterances express a speakers' recurrent assumptions, beliefs and goals) guided the analysis of participants' narratives (Hobbs 1987: 285 cited in Mishler 1986).

[12] QSR NU*DIST enhanced the consistency and speed of the analysis by ensuring all instances of key words or codes are captured. It also encouraged multiple sorting and multiple searches, tasks that would have been prohibitive if done by hand. The use of the program also allowed us to consolidate data, which enabled comparisons and juxtapositions of data from field notes, interviews, codes, memos annotations and other reflective remarks (Weitzman 2000). Caution was exercised in the use of QSR NU*DIST to ensure that, despite the easy access to word and phrase codes, we developed an in-depth and clear understanding of the transcripts in their entirety; this guarded against the tendency to de-contextualize the material due to a focus on the smallest units of analysis.

[13] According to the licensing information, there is a two-year requirement for active practice but once that is met, active practice is maintained by attending 60 births per year, 40 of which are as the primary midwife (20 can be as an attending midwife).

[14] Since 2001, the University of British Columbia has offered a four-year baccalaureate degree. The highly competitive program admits 10 students per year.

[15] There is no regulating body that requires childbirth educators to meet practice or certification requirements, however, the Perinatal Education Guidelines developed in the 1990s state that perinatal educators should take a course.

[16] Many rural communities without local access to Caesarean section have instituted recommendations and policies discouraging women having their first child from birthing locally. The rationale behind this acknowledges that nulliparous women will require transfer for Caesarean section to manage non-progressive labour more often than multiparous women (Consensus Conference Panel 2000).

[17] Member-checking consists of reporting back preliminary findings to respondents or participants, asking for critical commentary on the findings, and potentially incorporating these critiques into the findings. This adds accuracy and richness to the emerging understanding of the phenomenon (Altheide and Johnson 1994).

[18] This recommendation builds on initiatives of the B.C. Reproductive Care Program, which provides the Women's Advanced Maternity Fellowship for Rural Practitioners and the Perinatal Nursing Competency Collaborative Partnership to support maternity care providers in rural or small urban B.C. communities.

**Projects Funded through Status of Women Canada's Policy Research Fund
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The Impact of Long Term Care Patient Classification Systems on Women Employed as Caregivers in Rural Nursing Homes
Belinda Leach, Bonnie C. Hallman

Rural Women's Experiences of Maternity Care in British Columbia: Implications for Policy and Practice
Jude Kornelson and Stefan Grzybowski with Michael Anhorn, Elizabeth Cooper, Lindsey Galvin, Ann Pederson and Lana Sullivan

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Diane Martz, Maureen Reed, Ingrid Brueckner, Suzanne Mills

Public Policy and the Participation of Rural Nova Scotian Women in the New Economy
Ann Manicom, Janet Rhymes, Nan Armour et Doreen Parsons
The Women's Economic Equality (WEE) Society in partnership with the Hypatia Project

*   Some of these papers are still in progress and not all titles are finalized.

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