

Exploring the Competing Risk Rationalities Surrounding Surgical
Birthing Interventions:
The Risk Positions of Expectant Mothers and Issues Surrounding Informed Choice

by

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A thesis submitted to the Faculty of Graduate and Postdoctoral Affairs in partial fulfillment of
the requirements for the degree of

Master of Arts in Sociology

Carleton University

Ottawa, Ontario

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Abstract

Contrary to the World Health Organization's (WHO) recommendation of 10-15%, Canada's caesarean section (C-section) rate is presently greater than 27%, making it the most common surgical procedure performed each year (CIHI 2015b). This thesis seeks to establish a link between the risk discourses present in popular sources of pregnancy-related information and the alarming national C-section rate. This is achieved using a mixed methods approach. First, data from the Maternity Experiences Survey (MES) is used to assess the sociodemographic context of C-section in Canada. This is followed by a qualitative description analysis of the risk discourses present in several popular sources of pregnancy-related information. Notably, findings suggest that the type of care provider and the type of birth have an impact of women's satisfaction with the information they received leading up to labour and delivery. The implications of these findings within the broader context of the Canadian maternity care culture are explored.

Keywords: C-section, risk, pregnancy, decision making, qualitative description

Acknowledgements

To the many thought-provoking researchers who have encouraged and inspired me along the way—Dr. Beth Jackson, Dr. Barb Davies, and Dr. Bruce Curtis among others—you have my sincere thanks.

To Paula Whissell, Kim Mitchell, and the rest of the incredible administrative support team in the Department of Sociology and Anthropology – I really appreciate the chats, smiles, and the fielding of my innumerable questions. The department is so welcoming because of you – Thank you for everything that you do!

To Dr. Amir Erfani, the first professor who piqued my interest in academic research, particularly on the topics of maternal health and demographic trends. Thank you for seeing my academic potential and for encouraging me to pursue graduate studies.

Special thanks to Dr. Jen Pylypa and Dr. Janet Siltanen for your engaging classes, but more importantly, for your support during my thesis defense.

To Dr. Keith Denny: Thank you for welcoming a confused and inexperienced graduate student into your office in December 2013, and for enduring my endless topic changes, questions, and missed deadlines. Your feedback and guidance throughout this entire process have been invaluable.

To Dr. LA Keown: I am more grateful that I can express. I am proud to consider you my mentor, but more importantly, my dear friend. For the chats over drinks, the dinners and lunches, the countless coffees, the laughs, the endless advice and support (not always related to academics), and for the listening ear – you have my sincerest gratitude. Thank you for making my graduate school experience like something out of a movie.

To James Eastman-Timmons: Where do I start? Thanks—just thanks. I’m beyond stoked that I get to call you my friend: *the Man, the Myth, the Legend*.

To rest of my family and friends: I wish I could thank you each by name here, but alas this would turn into another chapter, and I am *definitely not* signing up for that—these 6 chapters took me long enough, thank you very much. But in all seriousness, I am so grateful to have a support network of people who are so understanding and caring. Most of you don’t even know you had an impact, but you did.

To my Nana and Papa: Thank you for your support, for believing in me, for always asking “how is school going,” even though what you really wanted to ask was “aren’t you finished yet?” Most of all, thank you for understanding that my long bouts of radio silence are not at all indicative of my adoration for the both of you. I love you, my little cabbage heads!

To Mushy and Fudgy (sorry guys, I had to): First off, thanks for giving me life and all that! And second – thanks for always encouraging me to strive for the best and to pursue my dreams. You are a big reason that I didn't quit—although the thought definitely crossed my mind on more than one occasion—I just want to make you both proud.

And finally, to my sweet Ryan. I don't even know where to start, or what to say. But I think you already know, so I'll just leave it at this—thanks for being my rock, my most productive critic, my fellow brainstormer, and my biggest cheerleader. I love you—and it's finally time to pop that champagne!

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List of Abbreviations

AWH	Association of Women’s Health
BORN Ontario	Better Outcomes Registry & Network of Ontario
CAM	Canadian Association of Midwives
CFPC	College of Family Physicians of Canada
CIHI	Canadian Institute for Health Information
CMA	Canadian Medical Association
MES	Maternity Experience Survey
OBGYN	Obstetrician/gynaecologist
OECD	Organization for Economic Co-Operation and Development
ONNC	Obstetric and Neonatal Nurses of Canada
PHAC	Public Health Agency of Canada
RDC	Research Data Centre
SOGC	Society of Obstetricians and Gynaecologists of Canada
SRPC	Society of Rural Physicians of Canada
UCLA	University of California, Los Angeles
VBAC	Vaginal birth after caesarean
WHO	World Health Organization

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Chapter 1: Literature Review

Many people have described birth as a rite of passage, and it is certainly a life-altering experience. It can be a beautiful, incredible, and empowering life-altering experience, or it can be a devastating, traumatic, scarring—literally and figuratively—experience.

- Lake and Epstein, 2008

In 2002, the Organization for Economic Co-Operation and Development (OECD) first reported that maternal and newborn health in Canada were deteriorating, with Canada's international ranking declining on several key indicators, including infant and maternal mortality. Compared to a decade earlier, rates of infant mortality plunged from sixth to twenty-first, and maternal mortality slipped from second to eleventh (Haworth-Brockman, Clow, and Beck 2012). The dominant conception of pregnancy as a risky venture is one that has evolved amid a complex web of demographic and socio-political trends since the late nineteenth century (Hallgrimsdottir and Benner 2013). High C-section rates in the developing world are often seen as evidence of a drastic increase in the medicalization of childbirth (Malacrida and Boulton 2014; O'Callaghan 2010). Since the 1970s, a substantial body of literature which critiques medicalization has grown, much of which is focused on the mechanism of social control (for examples, see Beckett 2005; Conrad 2007; Crossley 2007; Foucault 1975; Loe 2004; Mansfield 2008; Martin 2001; Miller 2009; Riessman 1983; Zadoroznyj 1999; Zola 2005). This signals a need to look more closely at the current culture of maternity care in Canada, where C-section is the most common surgical procedure (Canadian Institute for Health Information (CIHI) 2015b), with over 100,000 being performed between 2012 and 2013 (CIHI 2014a).

Since 1985, the World Health Organization (WHO) has stated that the ideal rate for C-section internationally is between 10-15% (WHO 2015). For many, it may seem staggering to know that childbirth is the top reason for hospitalization in Canada (CIHI 2015b). While the procedure undoubtedly saves lives and leads to better health outcomes in emergency circumstances, experts caution that the routinization of the procedure—particularly for nonmedical reasons—puts healthy women and babies at undue risk of the complications of major surgery (O’Callaghan 2010). While obstetric care is necessary for women in certain health risk categories, there is a strong movement that counters the automatic assumption that *all* births require medical management (Shaw 2012:522). Murphy (2015) notes that it is not the medically necessary C-sections that are worrisome for researchers and health organizations, but rather we should be focusing on diminishing the routine *misuse* of C-section for low-risk pregnancies. That C-section is such a contentious issue among care providers, policy makers, and expectant mothers is an interesting phenomenon, and evidently this signals that decisions surrounding surgical birthing interventions should not be taken lightly. One of the main goals of this thesis is to better understand the risk ideologies that contribute to decision making of this magnitude during labour and delivery.

The specific research questions I seek to answer are: (1) What are the main sources of information that women draw from for pre- and post-natal decision making? (2) What sorts of risk discourses are embedded in various sources of information? How are the risks associated with C-section presented in these outlets? Finally, (3) How satisfied are women with the contemporary prenatal model in terms of the information available to them, and their own involvement in decision making processes throughout their

pregnancies, labour and delivery, and postpartum experiences? Throughout the analysis, I focus specifically on C-section, with the ultimate goal of drawing attention to the complex relationship between heightened perceptions of risk in pregnancy and the alarming number of C-section deliveries performed in Canada.

In a recent article, Lupton and Schmied note that “[t]here are surprisingly few sociological studies into women’s experiences of Caesarean sections” (2013:83). This project undertakes this task by seeking to identify the key underlying sociodemographic factors which act as determinants in information availability and decision making, while focusing on the competing risk rationalities that women must navigate when they are faced with decision making during labour and delivery. Regardless of whether women must give consent for a C-section that is planned or in response to emergent complications during labour, I am interested in assessing the ways in which women respond to and interact with these competing risk rationalities in order to make decisions.

There are three sociocultural theories that dominate current risk discourses: the cultural symbolic perspective, the risk-society perspective, and governmentality. Summarized succinctly elsewhere (Lupton, 1999; Zinn, 2004) these theories are typically viewed as independent of one another, and as Lupton notes, “all three major sociocultural perspectives tend to operate at the level of grand theory, with little use of empirical work into the ways in which people conceptualize and experience risk as part of their everyday lives” (1999:6). These risk theories are approached differently here, as I argue that the modern context through which expectant mothers navigate pregnancy-related risk discourses converges in all three of these perspectives. I am also interested in looking at pregnancy-related discourses through a technico-scientific lens, which differs from

sociocultural approaches as it focuses on combining the notions of risk-related danger or hazard with calculations of probability (Bradbury 1989; Lupton 2013:27). Sociocultural approaches, in contrast, are more concerned with the role of risk in society (Lupton 1999:1). Both perspectives are viewed critically here as a valuable lens through which to understand the risk frameworks that surround modern medical encounters.

Sociocultural Approaches to Risk Theory

Sociocultural proponents of risk theory posit that risks cannot be understood isolated from their social, cultural, and historical contexts. Indeed, what are identified as risks typically serve social, cultural, and political functions, and are in fact the outcome of sociocultural processes constructed by both ‘experts’ and lay persons alike (Lupton, 1999).

The Cultural/Symbolic Perspective

The cultural/symbolic perspective was originally proposed by Mary Douglas in the mid-1980s (Lupton 2009). She attributes the use of risk by contemporary western societies as a means of maintaining cultural boundaries: Risk is used as a locus of blame as risky groups or institutions are singled out as dangerous (Douglas, 1969). These risks are formulated through cultural assumptions and are therefore shared conventions and expectations rather than individualistic judgements or cognitive aids for the individual decision maker (Douglas 1985:80). However, if we compare contemporary uses of risk to like concepts in other times and places, it becomes apparent that risk is an increasingly individual phenomenon. Douglas outlines how risk has evolved since the seventeenth century from “the probability of an event occurring, combined with the magnitude of the losses or gains that would be entailed” (1990:2), to a concept which made humans risk

averse, because they are increasingly responsible for making decisions according to hedonic calculus, which requires them to evaluate the outcome of an act by taking into account the total value of its consequences. Douglas (1990) further notes that while risk in the 17th century referred to probability, losses, and gains, contemporary conceptions of risk now imply danger (3), and as a concept, risk is used to assess the dangers ahead (5).

Risks as Forensic Resources

Part of the cultural/symbolic perspective proposed by Mary Douglas involves looking at how risks often act as ‘forensic resources,’ which provide explanations for things that have gone wrong, or for unfortunate events that are foreseen to occur (Douglas 1990). Heightened perceptions of risk that are characteristic of late modernity are problematic because while risks have indeed acquired new prominence across the industrial world, countless other forms of risk have decreased, as indicated by data for mortality and morbidity (Douglas 1990). Nonetheless, it is the negative connotations associated with risk which are most prominent; in other words, often things that go wrong, or that are feared to go wrong, are framed in a way in which risks are a central explanation.

In medical encounters, risks are routinely framed as forensic resources. Consider prenatal care as an example: the pregnancy-related information available to women, most of which comes from physicians, as I explore more deeply in Chapters 4 and 5, is fraught with details about various forms of risk, from the risks associated with eating sushi during pregnancy, to the risks associated with pregnancy at an advanced maternal age. This, Mary Douglas explains, is risk being used as a forensic resource. Throughout this thesis, I posit that risks, when presented as forensic resources, influence decision making

by highlighting the scientific assessments that stem from technico-scientific disciplines, which serves to heighten perceptions of danger to the mother and unborn child. Using risk in this way has considerable implications in terms of knowledge translation and the ways in which ‘expert’ knowledge is conveyed to expectant mothers.

The Risk-Society

Popularized by Ulrich Beck and Anthony Giddens, the risk-society thesis focuses on macro-structural factors that influence what is viewed as an intensification of concern in late modern societies about risks. In this view, risk is not a new phenomenon, but rather risks have increased in magnitude as a consequence of industrialization, and are now globalized, which makes them more difficult to calculate, and therefore more difficult to manage and avoid (Beck, 1992).

Reflexive modernity is a key concept in this approach, whereby modernity is no longer seen as unproblematically creating goods such as wealth and employment, but consequently also creates dangers or ‘bads’ such as pollution and unemployment. Beck provides a concise explanation of reflexive modernization as it relates to the risk society:

If simple (or orthodox) modernization means, at bottom, first the disembedding and second the re-embedding of traditional social forms by industrial social forms, then reflexive modernization means first the disembedding and second the re-embedding of industrial social forms by another modernity. Thus, by virtue of its inherent dynamism, modern society is undercutting its formation of class, stratum, occupation, sex roles, nuclear family, plant, business sectors and of course also the prerequisites and continuing forms of natural techno-economic progress. This new stage, in which progress can turn into self-destruction, in which one kind of modernization undercuts and changes another, is what I call the stage of reflexive modernization. (1994:2)

Individualization is also a key premise of risk-society theories. This concept is centered on the assumption that modern society is characterized by a progressive loss of

tradition and social bonds that typically serve as a means of structuring the life-course and forming personal identity. As a result, dangers are conceptualized and dealt with by individuals positioned as choosing agents. Risk thus becomes a human responsibility in terms of both production and management, and as a result, individuals exercise a high level of control over the extent to which they expose themselves to danger. Individuals are therefore culpable for becoming prey to risk (Lupton 1999). This concept leads to ideas surrounding moral weight, because as Katz Rothman notes: “the risks we perceive and the risks we take are judged, by ourselves and by others” (2014:2). This aligns with Douglas’ views on the role of culture in mitigating risks as phenomena which are framed in cultural assumptions, because despite responsibilities surrounding risk being centered on the individual, there are certain boundaries and expectations that we hold as a social or cultural body that act as a frame of reference for our self-management of risks.

Governmentality

The governmentality perspective, popularized by Michel Foucault, focuses on the role played by experts in constructing and mediating discourses surrounding risks. In his seminal lecture on governmentality at the Collège de France in February 1978, Foucault discussed how government as a problematic concerns itself with a diverse set of questions, including the government of oneself, of souls and lives, of children and pedagogical matters, and probably most familiar, the government of the state by a ruler. He posits that these problems, particularly in the 16th century, juxtapose at the crossroads of two processes: state centralization, or the abolishment of feudalism, and dispersion and religious dissidence, brought to the forefront by the Reformation and Counter-Reformation (Foucault 1991:88).

Late modernity however, is characterized by a huge network of expert knowledges, accompanied by apparatuses and institutions built around the construction, reproduction, and dissemination of these knowledges (Lupton 1999), and contemporary perspectives of governmentality are particularly relevant when we maintain focus on Foucault's early notion of state centralization. Foucault describes the establishment of territorial, administrative, and colonial states as processes of governmentality, implying an underlying drive for power and authority. While this conceptualization of governmentality draws heavily on the feudal and early-industrial eras to provide a rich historical context, modern liberal systems of government focus rule and maintain order through voluntary self-discipline rather than via violence and coercion, and risk is therefore framed as a governmental strategy of disciplinary power (Lupton 1999).

While Lupton notes that governmentality theory, like the cultural/symbolic and risk-society perspectives, operate largely at a grand theory level (1999:6), O'Malley (2009) notes that governmentality is more appropriately described as an analytical technique: "Governmentality is not a theory, in the sense of a consistent set of concepts and theorems developed for explanatory purposes. Rather it is at best a heuristic analytic and does not pretend to be all-encompassing" (13). O'Malley also cautions against governmentality analyses which point to a new form of programmatic politics—such as feminism, or proletarian programs—as these paradoxically expose us to new forms of subjectification (2). He posits that analyses should focus on destabilising and questioning the issue at hand by exposing its contingency or superfluous nature. As an analytical lens for this thesis, a governmentality perspective might be interested in understanding the nature of the problem of childbearing that must be managed rather than focusing on how

maternal health encounters can escape invasive models of intervention and biomedical management.

As with the cultural/symbolic perspective, the concept of normalization is also relevant within the governmentality perspective. This is the method by which norms of behaviour are identified in populations and by which individuals are then compared. Those who deviate from this norm are typically seen as 'at risk.' Therefore, to be designated as at risk is ultimately to be positioned in a network of factors drawn from the observation of others (Lupton 1999). Neoliberal ideologies also tie in closely with governmentality, because individuals are viewed as having a personal responsibility for avoiding and managing risks as a key element of self-discipline, and this self-management of risk and the increasing privatization of risk have become characteristic of neoliberal societies, and neoliberal health discourses in particular. Individuals increasingly view their own bodies with the medical gaze, and basic screening tools—for example, home pregnancy tests—are readily available to facilitate an individual's use of self-surveillance medicine (Katz Rothman 2014:2).

This raises countless questions surrounding responsibility, risk and blame as it relates to health. Perhaps most compelling is determining to what extent individuals (who are presumed by experts to possess a mere 'lay knowledge' of their own bodies) are responsible for monitoring, managing, and mitigating risks. In recent years we have witnessed a neoliberal shift in public health approaches which have moved away from environmentalist models aimed at making the world safer for people, to a public education model in which individuals are expected to make themselves safer in the world (Katz Rothman 2014:3). However, if we also consider the divide between expert and lay

knowledges, and the validity and trust we place in each respectively, it becomes apparent that our conceptions of risk and our expectations surrounding how these should be managed are quite complex.

In a series of lectures at Vermont University in October 1982, published as *Technologies of the Self*, Foucault amends his conceptualization of governmentality to describe the “contract between the technologies of domination of others and those of the self” (Foucault 1988:19). He describes technologies of power as those that objectify the subject by determining their conduct and submitting them to certain ends or domination. Technologies of the self, he states, are those which individuals use on their own bodies and souls, thoughts, conduct, and ways of being, so as to transform themselves (18). These technologies of power that Foucault describes are central to my argument that dominant risk discourses, as technologies of power used broadly in pregnancy-related discourses, have a coercive effect that simultaneously serve as technologies of the self, as women absorb the dominant medicalized views of pregnancy and make decisions accordingly. One of the most prominent effects of this heightened perception of risk is the alarming C-section rate that is characteristic of Canadian maternity care.

Technico-Scientific Views of Risk

Technico-scientific perspectives of risk have emerged from disciplines such as science, engineering, psychology, economics, medicine and epidemiology. These disciplines treat risk as an objective phenomenon, taking a realist standpoint which assumes that these must be managed by scientific measurement and calculation. Through this perspective, very little acknowledgement is given to sociocultural and historical contexts that frame judgements surrounding risks, because lay judgements are viewed as

biased or ill-informed, and these stand in contrast to the presumed accurate and scientific assessments of experts (Lupton, 1999). In her later work, Lupton also notes that:

In the technico-scientific literature on risk there is sometimes evident an ill-masked *contempt* for lay people's lack of what is deemed to be 'appropriate' or 'correct' knowledge about risk. Lay people are often portrayed as responding 'unscientifically' to risk, using inferior and unsophisticated sources of knowledge such as 'intuition.' (2013: 28, emphasis added).

Emphasis is placed on both technico-scientific and sociocultural approaches to risk in this thesis. In my opinion, a complete understanding of the risks that expectant mothers must contemplate leading up to labour and delivery can only be understood when we consider how notions of danger, hazard, and probability are related to their sociocultural and historical contexts.

A Holistic View of Modern Risks

As mentioned earlier, this thesis posits that the modern context through which expectant women navigate pregnancy-related risks converges in all of the perspectives discussed above. In my opinion, a holistic understanding of the risk discourses that women must contemplate throughout their pregnancies is best understood when the perceived dangers and probabilities are considered in tandem with sociocultural and historical context. I hope to achieve this by examining my research questions through both sociocultural and technico-scientific lenses. Each of the risk theory perspectives discussed has its own merit, and as such has a partial frame of reference to contribute to the discussion of risk translation in pregnancy. One of the aims of this research is to explore how risks are framed within various sources of information available to women throughout their pregnancies. Specifically, I am interested in the ways in which risk

discourses surrounding C-sections are framed, and how these are contemplated by women as they make decisions about surgical birthing interventions.

While Douglas' conceptualization of forensic resources is most likely to be associated with the popular culture references to risk as understood today, a thorough analysis of the biomedical encounters that dominate modern maternal care requires a synthesis of technico-scientific conceptualizations of risk within modern sociocultural contexts. If we consider that risks are indeed used as a locus of blame (Douglas 1969) on the individual who strays from the normative cultural threshold of acceptable risk (Lupton 1999; Beck 1992), while simultaneously being the product of macrostructural forces that place the onus of governing risks on the individual (Lupton 1999; O'Malley 2009), then we have a convergence between all three of the predominant sociocultural risk theories.

This juxtaposition of theories will serve as my point of departure for analyzing risk translation surrounding C-sections. While more thorough analyses follow in Chapter 4 and 5, I will set the tone here with a brief review of the existing literature on risk and maternity care.

Risk and Pregnancy

So how are we talking about pregnancy and birth?

If you simply google 'risk and pregnancy', you get over 42 million 'hits'. Try 'risk and birth', and you get over 41 million – undoubtedly with some overlap. So no question, pregnancy and birth are understood as having risks, creating risks and being risky business indeed. But not the riskiest of business – google 'risk and food', and you get more than two and a half times as many hits, i.e. over 109 million.

- Barbara Katz Rothman, 2014

Where does the preponderance for regulating pregnancy originate from? Of course women love their unborn and have an innate sense of urgency when it comes to protecting themselves and their young—there is a wide body of literature on biological attachment to support this—but pregnancy, as illustrated in the quotation above, is a peculiar example of heightened perceptions of risk. Considering the sheer volume of risks that we face in the post-industrial era, it is fascinating that so much emphasis is placed on the mitigation and management of a natural biological function: reproduction. What's more is that the majority of the risk narratives surrounding reproduction are focused specifically on women's bodies, which raises questions about the gendering of risks and discourses surrounding the female body and its need to be managed by expert knowledge (see Shelton and Johnson 2006; Shaw and Giles 2009; Benoit et al. 2010; Leavitt 1987; Riessman 1983).

The Medicalization of Childbirth: A Brief History

The term *medicalization* refers to the process by which non-medical phenomena become defined and treated as medical problems, typically by being reframed in the form of illnesses or disorders (Conrad 1992:209). Biomedicine itself gained credence in part by the adoption of Cartesian dualism in the seventeenth century, which represented a crucial turning point for medical practice. This philosophy conceives the mind and body as dichotomous, with the body being viewed as “a machine governed entirely by the laws of physics, which might be taken apart and reassembled if its structure and function were to be fully understood” (McKeown 1979:4). As this perspective was increasingly accepted in subsequent centuries, medicine became the normative authority over the body in much of the Western world (Cahill 2001). In response, many feminist writers have

criticized obstetric literature for this very tendency towards disembodiment pregnancy, arguing against the uterus as a vessel for reproduction considered separately from the humanity of the woman involved (Christilaw 2006:266).

Since the 1970s, a substantial body of literature which critiques medicalization has grown, much of which is focused on the mechanism of social control (for examples, see Beckett 2005; Conrad 2007; Crossley 2007; Foucault 1975; Loe 2004; Mansfield 2008; Martin 2001; Miller 2009; Riessman 1983; Zadoroznyj 1999; Zola 2005). While Conrad notes that psychiatry was the first field to call attention to the pathologizing of non-medical problems (1992:210), childbirth is among the most illustrious examples of medicalization, brought to the forefront by feminist movements against male appropriation and critiques of the patriarchal model believed to be perpetuated by the biomedical sciences (Cahill 2001; Martin 2001; Riessman 1983, 1998).

While obstetric care is necessary for women with high-risk pregnancies¹, there is a strong movement that counters the automatic assumption that *all* births require medical management (Shaw 2012:522). Much of Talcott Parsons' work² is attributed as the source of critiques about social control surrounding the pathologizing of nonmedical issues (Conrad 1992:210), but Brubaker and Dillaway (2009) caution that the more prominent contemporary feminist perspectives tend to presuppose those of *all* women when we look at how the medicalization of birth has constructed women's experiences of subjective childbirth.

Despite the widespread acceptance in the Western world that pregnancy is a condition which must be managed expertly using medical and scientific means, the pathologizing of childbirth, like the concept of medicalization more broadly, is not

immune from criticism. This is in no small part because obstetric involvement and medical interventions are routine in *normal* childbirth in developed countries, despite negligible evidence of effectiveness (Johanson, Newburn, and MacFarlane 2002). Brubaker and Dillaway (2009) note that a key difficulty with the medicalization of childbirth is that ‘natural’ versus ‘medical’ maternity experiences have not sufficiently been negotiated as distinct concepts, which begs the question of how we can truly understand women’s childbirth experiences when there are a myriad of mechanisms that shape and conflict with women’s subjective experiences (32).

The critique that the medicalization of childbirth has taken away women’s autonomy while minimizing the importance and validity of non-medical forms of knowledge (Reissman 1983) is widespread. This is consistent with the feminist framework of medicalization, whereby medicalized views of pregnancy and childbirth are seen as biomedicine’s forceful appropriation of control over women’s bodies, and what has been typically women’s domain in terms of knowledge and perinatal care (Arney 1982; Davis-Floyd 1992; Kaufman 1993; Keirse 1993; Kitzinger 1006; Leavitt 1986; Martin 2001; Oakley 1984; Rothman 1989, 1993; Wertz and Wertz 1977; as cited in Brubaker and Dillaway 2009:34). The stigma, plight and subsequent push for a return of midwifery in Ontario and elsewhere in developed countries is a further example of the forceful expansion of medical jurisdiction surrounding childbearing processes and the complex struggle between competing bodies of knowledge that results (see Bourgeault 2006; Shaw 2013). When a societal paradigm shift in thinking about birth occurred, compelling women to begin seeking medical care for their pregnancies, midwives did not follow them into hospitals. These highly-skilled and traditional care providers were

presented as ‘old world’ and dirty, and hospitals were presented as modern, scientific, and expert (Lake and Epstein 2008).

Perhaps the most notable effect of medicalized birthing practices has been the shift towards hospitals being the most widely-accepted locations for maternity care, particularly for labour and delivery (Cahill 2001). While the West’s propensity towards attributing safe maternity practices to biomedicine is in no small part due to the substantial decline of maternal mortality in the twentieth century (Johanson et al. 2002), this trend is also indicative of the increased influence of the biomedical sciences and the credence given to this so-called *expert* source of knowledge, and as many are quick to point out: while maternal mortality fell precipitously in the twentieth century, only a small portion of those improvements were due to obstetric interventions (Picard 2014).

Table 1.1. Top 10 Reasons for Inpatient Hospitalizations in Canada, 2013 to 2014

	Most Responsible Diagnosis for Hospitalization	Number of Hospitalizations	Percentage of Hospitalizations	Average Length of Stay in Days
1	Giving birth	367,090	12.5	2.3
2	Respiratory disease (COPD)	77,808	2.6	7.7
3	Heart attack	70,054	2.4	5.1
4	Congestive heart failure	59,428	2.0	9.2
5	Osteoarthritis of the knee	56,444	1.9	4.1
6	Pneumonia	55,381	1.9	6.7
7	Other medical causes (e.g., palliative care, chemotherapy)	50,334	1.7	10.4
8	Mood (affective) disorders	49,978	1.7	15.1
9	Schizophrenia and other delusional disorders	40,702	1.4	20.1
10	Fracture of the femur	37,445	1.3	10.9

Source: CIHI. 2015a. “Inpatient Hospitalizations, Surgeries and Childbirth Indicators in 2013-2014.” *Data tables* (xlsx), March. Retrieved June 18, 2015 (<https://secure.cihi.ca/estore/productFamily.htm?locale=enandpf=PFC2805andmedia=0>).

For many, it may seem staggering to know that childbirth is the top reason for hospitalization in Canada³. Nearly 400,000 women were hospitalized for childbirth between 2013 and 2014, which is perplexing when we consider the other predominant

reasons for hospitalizations in Canada, including chronic obstructive pulmonary disease (COPD), heart attack and congestive heart failure, among others. The top 10 reasons for hospitalization in Canada are summarized in Table 1. Looked at in tandem, it is interesting to note that *giving birth*—a natural biological process—accounts for such a substantial proportion of hospitalizations, particularly if we consider that typically hospitals are associated with morbidity and acute emergencies.

The shift to childbirth in institutional settings has also been critiqued increasingly in popular media in recent years. The well-known documentary *The Business of Being Born* is a compelling example of the mainstreaming of resistance to medicalized birth. In June 2014, the *Globe and Mail*'s esteemed health columnist André Picard wrote an article titled "It's time to stop treating pregnancy like a disease." In it, he posits that "our insistence on medicalizing childbirth, including over-reliance on C-sections, is both risky and unnecessarily costly." Drawing on statistics from CIHI and Statistics Canada, Picard described the trends surrounding the procedures we use to deliver babies in Canada.

In this and an earlier article he wrote in 2014⁴, he outlines the regional disparities in C-sections and other interventions used in childbirth in Canada, noting that "[w]hen someone is placed in an institutional setting, there is often a cascade of dubious and not-always useful interventions that occur: Shaving of pubic hair, fetal monitoring, IV drips, inducement, epidurals, forceps, episiotomy and, of course, a caesarean section" (2014). There tends to be a domino effect of labour interventions, ultimately caused by epidurals early in labour, which lead to *emergency* C-sections in thousands of cases. When women are given an epidural, their labour slows, which results in the administration of Pitocin or some other form of contraction-inducing drug to expedite labour (Lake and Epstein

2008). This makes the contractions stronger and more powerful, which distresses the baby. When these situations lead to C-section to save the distressed infant, the interventions and surgery itself are subsequently presented as indispensable and life-saving. In reality, the C-section was totally preventable and the interventions would likely have been unnecessary had the woman been informed of the sequelae of events that can result from an early epidural (Lake and Epstein 2008).

Having come across Picard's article as an existing critic of the medicalization of childbirth, what struck me most was in fact the passionate and polarized debates that ensued in the comments section of the online edition of the paper. A disproportionate number of commenters reacted adversely to Picard's opinion—that births can be performed safely outside of hospitals, and that there are legitimate pain relief measures which can be used outside of institutional settings⁵—on the basis of his sex. Some of the comments include the following:

“Why is it always a man deciding what a woman should do? This writer should think of passing a watermelon through his body and crossing fingers for the best.”

“Is there a reason *The Globe and Mail* didn't choose a female journalist to write this piece? Likely their female writers laughed at them one by one until they were left with this guy. Of all the women I know who have given birth, naturally and by C-section, including me, not one has questioned the decisions of the doctors. Fewer women die in childbirth today because of medical intervention. I keep thinking of my obstetrician's hearty laugh when I asked her when she wanted me to give her my birth plan. Her response was to say that ‘what will happen will happen, and very rarely is there time to review a birth plan. The plan is to get the baby out as quickly and safely as possible, however that may be.’ Enough said.”

“I love how men like to weigh in on pain management in childbirth LOL!” (and in reply: “I know. Or when men talk ‘we are pregnant’ or ‘we are due’. It is very insulting to women.”)

“Who the heck is Andre Picard and why does he think he has anything to say about childbirth? Has he ever given birth? Is he a doctor?...Stop preaching, and start supporting women’s choices about what works for them.”

“Mr. Picard, how many babies have you delivered? Your article reminds me of teenagers complaining that their parents are terrible because they are too strict.”

While perspectives such as Picard’s that challenge dominant discourses are notoriously controversial, it was striking to me how pervasive his sex was in the reactions to his views as legitimate. If a woman had written the article, would it have been taken differently by some of the readers who felt that Picard could not have a position on childbirth on the basis of his sex? Paradoxically, comments such as the ones above reveal a sort of irony in that Picard’s article is rejected by so many as invalid because he is a man, yet we place an astounding amount of trust in the historically male-dominated field of obstetrics. My qualitative review of the prominent sources of information used by women throughout their pregnancies addresses this by looking at how information is presented differently to men, and the role of men in pregnancy, as portrayed in popular sources of information.

Constructing Birth as Risky Business

As noted above, the dominant conception of pregnancy as a risky venture is one that has evolved amid a complex web of demographic and socio-political trends since the late nineteenth century (Hallgrimsdottir and Benner 2013). In Canada and other post-industrial nations, the demographic shift observed in fertility and family patterns towards *older* women experiencing motherhood for the first time (Vézina and Turcotte 2009) has certainly contributed to popular notions of pregnancy as risky. This is despite limited empirical evidence to show increased pregnancy-related danger among healthy older

women (Carolan 2003; Jahromi and Hussein 2008; as cited in Hallgrimsdottir and Benner 2013).

The intense focus on risks throughout a woman's pregnancy and the routinization of perinatal surveillance techniques is a response to the medicalization of childbearing processes. This is most visible in contemporary practices of prenatal and perinatal monitoring, particularly among women of advanced age (Hallgrimsdottir and Benner 2013:9). Risk-based perinatal care has dominated the institution of pregnancy since the 1960s (Weir 2006), which has effectively created a culture of pregnancy-surveillance medicine that has been remarkably successful in problematizing *normal* health by putting healthy women *at risk* (Hallgrimsdottir and Benner 2013:9). Pregnancy has become a state of self-surveillance and self-monitoring, subject to the medical gaze through various technico-scientific means, and this self-discipline, heavily contingent upon the expert knowledges that are brought to bear upon the pregnancy, is a reflection of the privatization of risk that governmentality theorists are concerned with (O'Malley 2009).

The medicalization of bodily processes⁶ is also problematic because when framed as ailments, they inevitably become defined on scales ranging from normal to pathological, alienating people from their own subjective experiences (Bergeron 2007). This locating of bodily processes on an ordinal scale has led to the rise of surveillance medicine, and with it a shift in our integral understandings of health and illness (Armstrong 1995; Webster 2002). This is the crux of where sociocultural and technico-scientific perspectives surrounding risks intersect with the medicalized state of childbirth. Recall that Douglas' view of risk places normalization at the heart of cultural assumptions surrounding risks, which at once constrains autonomy and situates the locus

of blame and responsibility for mitigating risks on the individual. This propensity towards placing the individual as the driving force behind the regulation of risk is a key tenet of the governmentality perspective, yet as feminist researchers have pointed out, freedom of choice in childbirth is not even possible within the confines of medicalization due to its patriarchal control of women's bodies (Shaw 2013; Bergeron 2007; Parry 2008).

Competing Expert Knowledges in Pregnancy: Implications for Agency and Decision making

The monopoly of medicine in the management of health has had wide-ranging effects on the management of adverse outcomes in pregnancy and childbirth (Hallgrimsdottir and Benner 2013; see also Wrede, Benoit, and Einarsdottir 2008; Benoit et al. 2010). Among the most relevant are the authoritative claims around skill and expertise that have become centralized within the political agendas surrounding the professionalization of medicine in the West (Coburn, Torrance, and Kaufert 1983; Fahy 2007; cited first in Hallgrimsdottir and Benner 2013).

In obstetric care, there is an expectation for shared decision making, which occurs when women and their care providers discuss the risks and benefits of differing options to reveal their preferences in order to jointly make a decision (Dodd et al. 2007; Dugas et al. 2012; Kenton et al. 2005). However, this model of knowledge translation requires that adequate information about risks and benefits is communicated to women according to their personal needs and values. Decision making models such as these raise important questions about the types of knowledge that are translated to patients, particularly if we consider that biomedicine is the predominant model of maternity care in Canada and elsewhere in the developing world. It begs the question of whether perfectly valid, *non-*

medical narratives are excluded from these knowledge translation opportunities. While shared-decision making is heralded as a mechanism to decrease the informational and power asymmetry between doctors and patients by increasing the amount of information available to patients (Charles, Gafni, and Whelan 1997:681), who controls the flow of information?

While a vast body of literature shows that many patients want information about their medical condition and treatment options without necessarily being responsible for making treatment decisions (Charles et al. 1997), emerging critiques about the medicalized state of conditions such as pregnancy are advancing the de-medicalization agenda that Shaw (2013) refers to. Increasingly, the *informed* patient may prefer to make decisions herself. However, unless both patient and physician share treatment preferences, a shared treatment decision making process did not occur, not matter how much information may have been exchanged by either party (Charles et al. 1997:683). This has considerable implications in terms of the types and sources of information that are routinely used not only in encounters between *experts* and patients, but also those which are dominant in pregnancy risk discourses more broadly.

The following passage summarizes the complexity of maternal choice, raising numerous questions about the extent to which women actually have a decision when it comes to choosing a birthing option, in this case, a C-section:

One can see that the same concerns about social determinants of the woman's choice could arise in the question of caesarean birth by choice⁷. If a woman did not request a C-section, or refused one if offered by her physician, is she morally responsible if a fetal problem does ensue? Does that same scenario hold for the practitioner who refuses to honor a request for a C-section? Is this true even if statistically a poor fetal outcome is very unlikely at vaginal birth? In that case, could a woman be coerced into accepting an unwanted C-section? If so, the very existence of the option may create a problematic

ethical dilemma, and may in fact, restrict the freedom with which choice can be made. Even if women are able to avoid such obvious coercion, it is not unlikely that a woman would be severely criticized for choosing a natural birth over C-section if there were a poor fetal outcome. The social pressures such criticism induces may overwhelm women's self-determination. (Christilaw 2006:266-7)

There are countless sources of information from which women draw as they make these decisions and situate themselves in a risk position during their pregnancy. As chapters 4 and 5 will expand upon, the most common non-biomedical sources of information women identify are previous pregnancies, family and friends, midwives⁸ and doulas, classes, books and—of course—the ubiquitous Internet (Public Health Agency of Canada (PHAC) 2009a). Yet despite the broad availability of information from a myriad of sources, we have seen that biomedical *expertise* still has a monopoly over the flow of knowledge about how pregnancies ought to be managed safely.

Caesarean sections in Canada: A Consequence of Medicalized Birth?

High C-section rates in the developing world are often seen as evidence of the drastic increase in the medicalization of childbirth (Malacrida and Boulton 2014; O'Callaghan 2010). In Canada, C-section is the most common surgical procedure (CIHI 2015b), with over 100,000 being performed between 2012 and 2013 (CIHI 2014a). While the procedure undoubtedly saves lives and leads to better health outcomes in emergency circumstances, experts caution that the routinization of the procedure—particularly for nonmedical reasons—puts healthy women and babies at undue risk of the complications of major surgery (O'Callaghan 2010). The International Federation of Gynecology and Obstetrics' position is that normal vaginal delivery is safer in both the short- and long-term for mother and child. C-section has implications for later pregnancies and deliveries,

which raises concerns about artificial methods of delivery in place of natural processes without medical justification (Christilaw 2006:263).

Which Women Are Opting for Designer Births?

The word “posh” usually means being elegant and/or privileged and the term [too posh to push] appears to have arisen in the context of a belief that it was more highly educated or more wealthy women who sought delivery by caesarean section.

Jane Weaver and Julia Magill-Cuerden, 2013

The popular phrase “too posh to push” was coined over 15 years ago to describe a perceived trend towards maternal request for C-section in the absence of clinical indications. Several reasons for the persistence of the phrase have been theorized, the most prominent of which is its association with celebrity and its common use in popular media (Weaver and Magill-Cuerden 2013) to highlight the seemingly unique position of higher-class women to choose a so-called *designer birth*⁹, similarly to how they might select a luxurious piece of clothing.

Globally, women delivering by elective C-section are more likely to be married, educated (with more than 12 years of formal education), and delivering their first baby. Surprisingly, multiparous women who elected for C-section without medical indication were less likely to have experienced a previous risky pregnancy, as indicated by delivering a low-birth-weight baby or reporting a fetal or neonatal death (Souza 2010). Leeb and her colleagues (2005) found that after adjusting for maternal age, Canadian data did not in fact support the “too posh to push” hypothesis. Rather, they reported that it is women living in the lowest-income areas who were significantly more likely to have caesarean deliveries than those in the most prosperous areas, and that this trend is consistent when rural areas are included in the analysis. If we assume that these caesarean

sections are predominantly being performed for medical reasons, why is it that women of lower socioeconomic status are more likely to need medical intervention? Is it because they have different access to preventative prenatal care? Are they doing something differently during their pregnancies? Or are they making decisions based on different sources of information than women of higher socioeconomic status? If so, the implication is that women of higher socioeconomic status may be rejecting medicalized notions of pregnancy and birth, while women of lower socioeconomic status are still conforming more closely to the biomedical model of care, which makes them more likely to end up having a C-section, even by virtue of the aforementioned snowball effect of interventions. These are some of the key issues that will be explored by the quantitative analysis portion of this thesis.

Recent research has indicated that the choice to undergo a C-section is a complex issue that goes beyond a mere question of patient autonomy. There is a staggering amount of risk and benefit to be weighed in light of reproductive rights—much of which comes from conflicting sources of information. Advocates assert that decisions must be made with the aim of maximizing the empowerment of women, and despite seemingly limitless options for women in terms of birthing options, research cautions that adding alternatives does not necessarily enhance empowerment unless these truly improve the lives of women and their families—which in itself seems to be something that is difficult to reconcile (Christilaw 2006:268).

Weighing Agency against the Risks of Caesarean Section

Globally rising caesarean rates are attributed—at least in part—to maternal choice (Christilaw 2006; Reissman 1983). While quantifying the exact proportion of elective C-

sections is problematic in many places because cases are often booked under other diagnostic categories (Hannah et al. 2000), debates focused around questions of risks and benefits have made elective C-section a hotly debated topic in recent years, with the control of reproduction being a central theme in these discussions (Christilaw 2006:262). The fact is that women are having more C-sections than ever before, and while surgical birth can be lifesaving when medically indicated, it is not 100% safe. Compared to vaginal delivery, C-sections pose greater risk of cardiac arrest, hysterectomy, infection, fever, pneumonia, blood-vessel clotting, and haemorrhaging, not to mention the risks to the baby (Liu et al. 2007; Miesnik and Reale 2007; Negele et al. 2004). There are also considerable psychosocial and behavioural consequences to surgical birthing interventions (Lobel and DeLuca 2007; Somera, Feeley, and Ciofani 2010). Lupton and Schmied (2013) discuss the alienation that women reported feeling from their birthing experiences, a clear indication of the disempowerment that results from medical interventions in natural processes:

In the case of Caesarean deliveries, as these women's comments suggest, their bodies are experienced as absent from the birth because they are numbed or unconscious at the pivotal moment of the infant's body emerging and cannot even view the process. As they cannot rely on their bodies' sensations, the physical experience must be interpreted by others at the time or after the event once the woman has regained consciousness. (836)

The WHO (Souza 2010) reports that overall, the incidence rate for severe maternal outcomes associated with elective C-section is about three times greater than those associated with vaginal birth, and when elective C-sections are performed before the onset of labour, the risk of short-term adverse outcomes is nearly six fold (14 times above the level of risk when performed after the onset of labour). In fact, all modes of delivery other than spontaneous vaginal birth showed a trend towards increased short-term

adverse outcomes, which raises concerns about the use of C-section in the absence of medical need, making arguments about a woman's right to choose somewhat precarious.

While discussing agency and autonomy as precarious seems counter-intuitive, this is precisely where discussions about the dominant discourses surrounding C-section and its associated risks become so critical. For example, the WHO has made the following policy recommendation: "In order to reduce non-medically indicated caesarean sections, the reasons for use of the operation should be audited and monitored and, where necessary, appropriate health education and behaviour-change strategies should be developed and implemented" (Souza 2010). However, this begs the question about what exactly is considered *appropriate*, and what sorts of narratives and expert knowledges will be used to affect this behaviour change. Irrespective of the biomedical evidence to suggest that elective C-section can be detrimental, the framing of risks in this context is just one example of how experts have the ability to use their own brand of validated and legitimate knowledge to achieve a desired outcome.

Conclusion

The way in which risks are framed in pregnancy-related discourses is of central importance to this research. A comprehensive account of the various risk theories in sociocultural and technico-scientific literatures is imperative to my ultimate goal of understanding the risks that expectant mothers must contemplate leading up to labour and delivery. I am especially interested in the concepts of normalization and individualization, which seem to be common to all of the risk perspectives discussed above. Mary Douglas' conception of risks as forensic resources is also of particular importance to this research. Throughout my analysis, I seek to uncover the ways in which

these concepts manifest themselves in various outlets related to the alarming C-section rates that have become characteristic of Canadian maternity care.

This work is uniquely positioned in the existing maternal health and risk literature in that it considers how notions of danger, hazard, and probability are related to their sociocultural and historical contexts. To my knowledge, no other research has looked at the high rate of C-section in Canada through such a lens. In fact, this research falls within a literature gap identified by Lupton and Schmied: “[t]here are surprisingly few sociological studies into women’s experiences of Caesarean sections” (2013:83). The following chapter details the goals and chosen methodology for this research more carefully.

Chapter 2 contains details about my research methodology, including my research questions, the reasons I chose to use a mixed methods approach, the data sources I selected for the analysis, and the ethics approval I secured to gain clearance to perform this research.

Chapter 3 details the findings of my quantitative analysis. I present all of the findings in detailed tables and figures, following each with a detailed discussion of the findings and their implications, given the broader body of literature on this subject. In this chapter, I also address where my results deviate and correspond to the established research, and I postulate explanations for my findings.

Chapter 4 contains the results of my qualitative description analysis. The findings I present in this chapter complement the quantitative findings well, by delving deeper into the sources of information that women navigate as they face pregnancy-related decision making, with an emphasis on the risk discourses present in these sources.

Finally, Chapter 5 weaves together the findings from the quantitative and qualitative analyses, while engaging in a broader discussion about the overall implications of the results. In this section, I also acknowledge the limitations of this study, and I recommend a few areas that would benefit from further research.

Notes for Chapter 1

¹ The term ‘high risk pregnancy’ in this context is meant to indicate pregnancies that have been diagnosed by a prenatal care provider as being at higher risk for any range of morbidity outcomes (i.e., not a ‘normal, healthy’ pregnancy in colloquial terms). I acknowledge that this categorization is potentially fraught with contention, but I do not address this here.

² Parsons’ labeling theory, conception of the ‘sick role’, along with his work surrounding the relationship between deviance and illness, are widely attributed as sources of critiques about social control (Conrad 1992:210).

³ According to CIHI’s Health Indicators Interactive Tool, the proportion of deliveries resulting in Caesarean section increased from 18.7% in 1997 to 27.3% in 2013 (CIHI 2014b).

⁴ Picard, André. 2010. “Procedures for Delivering Babies Vary Markedly Across Canada.” *theglobeandmail.com*, May 18. Retrieved August 25, 2014 (<http://www.theglobeandmail.com/life/health-and-fitness/procedures-for-delivering-babies-vary-markedly-across-canada/article4319569/>).

⁵ This has also been legitimized elsewhere by *female* sources. For another well-known, easily accessible popular media reference, please see Lake and Epstein (2008).

⁶ “‘Natural’ in this context does not mean culturally unmanaged, nor does it imply that these processes and events are physically experienced in the same way...Rather ‘natural’ is simply a way of identifying physiological experiences and events that are everywhere part of the human condition” (Davis 2010:224).

⁷ Not to be confused with elective C-section. Caesarean birth by choice refers to the mother’s *consent* to undergo a caesarean delivery.

⁸ This is not to imply that midwives are not highly-skilled and trained maternal care providers, but rather reflects that their philosophy is dichotomous from that of the OB-GYN/medical community more broadly.

⁹ Designer births refer to elective C-sections scheduled so that tummy tucks are performed immediately afterwards.

Chapter 2: Methods

This analysis seeks to address the gaps in the current literature, as articulated by Lupton and Schmied: “[t]here are surprisingly few sociological studies into women’s experiences of Caesarean sections” (2013:83). This project undertakes this task by seeking to identify the key underlying sociodemographic factors which act as determinants in information availability and decision making, while focusing on the competing risk rationalities that women must navigate when they are faced with decision making during labour and delivery. Regardless of whether women must give consent for a C-section that is planned or in response to emergent complications during labour, I am interested in assessing the ways in which women respond to and interact with these competing risk rationalities in order to make decisions.

Establishing a Theoretical Framework

A thorough discussion of the main sociocultural approaches to risk theory is included in Chapter 2. These serve as a frame of reference for the quantitative and qualitative results. Throughout this project, I maintain that these risk theories are not mutually exclusive when we look at maternal health, because as my findings will demonstrate, the modern context through which expectant mothers navigate pregnancy-related risk discourses converges in all of the perspectives I describe in my literature review. Furthermore, as discussed earlier, I examine my research questions through both a sociocultural and technico-scientific lens, in order to gain a holistic understanding of the risk discourses that women must contemplate throughout their pregnancies. I posit

that this process is best understood when perceived dangers and probabilities are considered in tandem with sociocultural and historical context.

Mixed Methods Research

Mixed methods research is increasingly recognized as the third major research approach, along with qualitative and quantitative research, respectively (Johnson, Onwuegbuzie, and Turner 2007). However, the mixed methods paradigm is still in its adolescence, and is still somewhat unclear to many researchers (Leech and Onwuegbuzie 2009). Part of this lack of clarity is likely due to the numerous ways of combining methods in order to develop a mixed methods research design. Bryman (1992) identifies 11 ways in which qualitative and quantitative research can be combined in mixed-methods; these are presented in Table 2.1.

Tashakkori and Teddlie (2003) note that a truly mixed methods approach accomplishes two things: (1) it incorporates multiple approaches in all stages of the study, and (2) it includes a transformation of the data and its analysis through another approach. This thesis employs a two-stage design which combines descriptive and inferential statistical analysis with qualitative description, with the intention of complementarity between these.

Quantitative Analysis

Data Source

My research makes use of PHAC's Maternity Experiences Survey (MES). The variables available in the MES were used to examine the main sources of information that expectant mothers draw from for prenatal and postnatal information. The MES also includes the variables necessary to look at the satisfaction of women with various aspects

of their perinatal care experience, including their satisfaction with the information given to them by their care providers, and their overall satisfaction with their involvement in decision making processes, which are central themes in my research.

Table 2.1. Methods of Integrating Qualitative and Quantitative Research

Ways of combining Qualitative and Quantitative Research	
1	Checking for examples of qualitative findings against quantitative findings.
2	Using qualitative results to support quantitative findings.
3	Using quantitative results to support qualitative findings.
4	Combining methods to provide a more general picture of the issue under study.
5	Structural features are analyzed with quantitative methods and processual aspects with qualitative approaches.
6	The perspective of the researchers drives quantitative approaches, while qualitative research emphasizes the viewpoints of the subjective.
7	The problem of generality can be solved for qualitative research by adding quantitative findings.
8	Qualitative findings may facilitate the interpretation of relationships between variables in quantitative data sets.
9	The relationship between micro- and macro- levels in a substantial area can be clarified by combining qualitative and quantitative research.
10	Can clarify relationships by combining qualitative and quantitative research, which can be appropriate at different stages of the research process.
11	There are hybrid forms that use qualitative research in quasi-experimental designs.

Source: Bryman, Alan. 1992. "Quantitative and Qualitative Research: Further Reflections on their Integration." Pp. 57-80 in *Mixing Methods: Quantitative and Qualitative Research*, edited by J. Brannen. Aldershot: Avebury.

The main limitation I encountered in using the MES is the sample size. Because I am focusing on C-section as a specific birth outcome, the sample size is greatly reduced, limiting the disaggregation of the covariates and outcome variables. This means that multiple logistic regression was not possible, despite the fact that this would have been the ideal statistical method for the inferential data analysis. As will be seen in Chapter 4, an insufficient sample size warranted some of the covariates being collapsed into less meaningful categories. A complete list of the recoded variables is included in Appendix A. A second limitation is the exclusion of some key sociodemographic indicators, including occupation. In order to quantify socioeconomic status, typically researchers

will analyze income, education, and occupation, but unfortunately the latter was not available. In retrospect, its inclusion in the survey would not necessarily have meant that it could be included in the analysis however, since the sample size would likely have restricted its use to groupings that were not meaningful.

Sample

The MES sample consists of 8,244 women who were identified from a random stratified sample of recently born singleton infants drawn from the 2006 Census. Birth mothers living with their infants at the time of the survey were invited to participate in a 45-minute long interview. Complete responses were obtained from 6,421 (weighted $n = 76,508$) women whose infants were between the ages of 5 and 10 months old in the provinces, and 9-14 months old in the territories (PHAC 2009b). This analysis is focused specifically on women's experience with C-section, so the sample size varies depending on the outcome variable in question. For instance, some of the crosstabulations compare vaginal births to C-sections, which retains a sample size that approximates the original sample of 6,421, while others look exclusively at women who had C-sections, reducing the sample by approximately 75% (to around 1,600 women).

Data Access

The MES is available via federal Research Data Centres (RDC). Data access for graduate students requires an application that involves a comprehensive project proposal along with a letter of support from the project supervisor, a security screening protocol, and a microdata research contract with Statistics Canada. I completed the application process in late Fall 2014, and I was granted access to the RDC in January 2015. All MES analysis was completed onsite at the RDC, which is located at the University of Ottawa.

Data Analysis

Descriptive and inferential statistics were used to explore the MES. All analysis was conducted using Stata Data Analysis and Statistical Software version 13.0, because it can easily incorporate bootstrap weights (Stata *N.d.*). Following the directions of Statistics Canada (Gagné, Roberts, and Keown 2014), both descriptive analysis and logistic regression analysis were performed on the weighted sample of women. The weights correct any errors in the estimate introduced by the complex sampling frame. The variances for the analyses were calculated using bootstrapping to capture the variability introduced by the sample design and weighting adjustments (PHAC 2009c).

Descriptive Analysis

The descriptive analysis consists of a series of crosstabulations which look at the distribution of various independent variables across specific outcome variables. The tables provide the 95% confidence intervals as well as the coefficients of variation (CVs). In a single variable setting, the CV is the ratio of the standard deviation to the mean (UCLA *N.d.*). As mentioned above, these variances were calculated using bootstrap weights to capture the variability attributable to the survey design and weighting adjustments (PHAC 2009c). Statistics Canada advises that estimates with CVs between 16.6% and 33.3% are of marginal quality, and estimates with CVs greater than 33.3% are unreliable (Statistics Canada 2005). As such, these estimates have been flagged with footnotes. Estimates based on unweighted numerator cell sizes with fewer than 5 cases are also excluded. In the event of such small numbers, the categories of the covariate were collapsed in order to still present some, albeit less detailed, information about the independent variable in question. Missing data has been excluded from the analysis.

PHAC reported that there were low levels of item non-response on the MES, so the missing data has minimal impact on results (PHAC 2009c).

Data looking at the type of birth were analyzed by the following sociodemographic covariates: mother's age at the time of birth, mother's level of education, parity (i.e., primiparous meaning first birth vs. multiparous meaning women who had at least one previous birth), province of birth, size of geographic region, household income, and the type of perinatal care provider.

In addition, the type of birth was also analyzed by two indicators of maternity care satisfaction that are relevant to this study: (1) satisfaction with the information given by the care providers, and (2) satisfaction with involvement in decision making with care provider.

Regression Modelling

The regression models used in the analysis are nonlinear, which means that the magnitude of the change in the outcome variables attributable to any of the given independent variables depends on the levels of all of the covariates (Long and Freese 2014:227). In logistic regression, the overall fit of the model is secondary to the analysis of the covariates; here, the analysis is assessing which of the significant variables in the model contribute to explaining changes in the outcome when we control for other variables (Menard 2002). In other words, which variables are most important? Nonetheless, I do include both the Pseudo-R values and the Hosmer-Lemeshow statistics for each model.

Goodness-of-Fit Tests

Pseudo-R² values may provide a rough index of whether a model is adequate within a substantive area (Long and Freese 2014:221). The Hosmer-Lemeshow statistic, in comparison, compares the predicted probabilities with the observed data (Long and Freese 2014:223; Archer and Lemeshow 2006). The test works by essentially forming a 2×10 contingency table, then testing the null hypothesis between the observed model and the expected model. Therefore, we hope to have a nonsignificant chi-square value ($p > 0.05$) (Hosmer and Lemeshow 2000:150; Archer and Lemeshow 2006; Abu-Bader 2010:131).

The Models

The logistic regression models were run with and without the weights, since the weighted models do not accept traditional tests of fit. The constant in the models is the expected value of the log-odds of our outcome variable when all of the covariates are equal to zero (University of California, Los Angeles (UCLA) *N.d.b*). The constant values in my analysis are both significant and larger than would be ideal, which indicates that an explanatory variable is missing from the analysis, indicating that part of the phenomena in question cannot be explained. The qualitative portion of my analysis seeks to explore what is left unexplained by the regression models; a complete discussion of the qualitative and quantitative results is included in Chapter 6.

Two models were initially conceived for the analysis: the first looked at women's satisfaction with the information given by their healthcare providers as the outcome variable, while the second looked at women's satisfaction with their involvement in decision making with their healthcare team during their entire perinatal care period.

However, due to the sample size of the dataset, I was unable to include a key variable in my modelling: the type of birth, which ideally would include vaginal birth, unplanned C-sections, C-sections planned for medical reasons, and elective C-sections. As such, I split labour and delivery outcomes into two variables, one of which looks at whether the baby was born via vaginal birth or C-section, and the other which looks exclusively at C-sections, with all planned and unplanned surgeries grouped together, respectively. I then ran the models with each of these variables included separately, for a total of 4 models. The particulars for each outcome variable and covariate are included in Appendix A.

I ran each model twice—once with each respective labour outcome variable. This made it possible to include the type of birth in the analysis, while also providing the opportunity to compare the results of each analysis, in order to identify the most important explanatory variables for the entire sample of women, and also just for the sample of women who gave birth via C-section. Unfortunately, due to the limited sample size, it was not possible to include a distinction between whether C-sections were performed for medical or elective reasons, although I was able to make this distinction in my descriptive analysis. The importance of this distinction is addressed in the literature review, and is revisited in Chapters 4 and 6.

Qualitative Analysis

In exploring the role that the medicalization of childbearing has had on increasing rates of surgical birthing intervention in Canada, I plan to follow with a discussion of the impact of heightened perceptions of risk on decision making surrounding surgical birthing interventions. Particular emphasis is paid to the sources of information that women refer to throughout their pregnancies, and the risk discourses that are embedded

in these; I expect that the majority of information sources will be disproportionately skewed, presenting views predominantly from a medical perspective, which largely present pregnancy-related risks as forensic resources.

Wherever possible, the information sources that women identify as most useful will be scrutinized for discourses contributing to risk perceptions in order to better understand how risk rationalities are embedded in the very information sources that women refer to as they make important decisions throughout their pregnancy. Table 2.2 identifies the most useful sources of pregnancy-related information, according to the participants of the MES.

Table 2.2: Mothers' Most Valuable Source of Information, Canada, MES, 2006-2007

Source of information	%	n
Previous pregnancy	17.52	1060
Family/friends	10.39	684
Medical doctor	26.56	1622
Midwife or doula	5.239	285
Nurse or Nurse Practitioner	2.169	178
Classes	7.033	442
Books	23.08	1404
Internet	8.012	483
Total	100.00	6158

I directly explore top-selling pregnancy books and Internet sources, including popular pregnancy blogs. Due to the fact that I did not conduct interviews for this research, I am not able to directly analyze the information provided by care practitioners, such as physicians and midwives. However, I do assess the official positions and policies of their regulating or professional associations, while being mindful that these are indirect ways of looking at these sources, and that members of these professional bodies do not necessarily agree with, or advise their patients based on these official guidelines. This is discussed in more detail in Chapter 5.

The findings from this component of my thesis will once again inform my larger discussion surrounding the impact of risk discourses on decision making. I posit throughout my thesis that risk rationalities which are embedded in seemingly-neutral information sources serve to remove the element of choice from decision making, by superimposing discourses that sway women using notions of safety, wellbeing, and sensibility.

Qualitative Description

In order to achieve the ambitious research plan I have proposed, I intend to make use of an under-appreciated, but highly effective method to analyze the sources of information that women identify as most useful: qualitative description. Margarete Sandelowski (2000) notes that the growth of qualitative research, along with the vast array of qualitative methodologies available, has led researchers to sometimes feel obligated to perform ‘methodological acrobatics’ (i.e., to designate their work as phenomenology, grounded theory, ethnography, or a narrative study, when in fact it is not). While qualitative description is often criticized as being too simple and lacking rigour (Sandelowski 2000; Milne and Oberle 2005), it is a useful alternative qualitative research approach that is especially relevant in mixed methods research (Neergaard et al. 2009).

Some of the advantages of this method are: (1) its suitability in research where time or resources are limited (Neergaard et al. 2009); (2) that the descriptive summaries it yields may serve as the working hypotheses or key categories for future theory-based research (Sandelowski 2000); (3) it is both rigorous and credible, despite arguments to

the contrary (Milne and Oberle 2005); (4) and perhaps most importantly, no theoretical strings are attached to the analysis of qualitative description data (Neergaard et al. 2009).

While this last point is advantageous in that the rich, descriptive analysis stays close to the data and the informants' point of view, its lack of theoretical grounding can make the analytical process somewhat subjective, since the researcher's perceptions, inclinations, sensitivities, and sensibilities will all be factors in the analysis (Sandelowski 2000). This warrants a brief discussion of conscious reflexivity and phronetic praxis as a necessary element of any qualitative research. It is necessary to be conscious of these concepts, because researchers are inherently co-constituents of their qualitative research, not only in constructing the collection, selection, and interpretation of data, but also in terms of the meanings that are negotiated within their unique positionality (Finlay 2003:5).

Reflexivity in Qualitative Research

In order to critically reflect upon the practice of qualitative description, it is necessary to situate the issues of phronesis and reflexivity in the analysis, while keeping in mind that both objectivity and values simultaneously have places in social science research. I would argue that the conscious and diligent use of reflexivity is the only conceivable way of preventing the violation of objectivity that qualitative description that Sandelowski (2000) describes. A feminist approach to this may be particularly relevant here; according to Mary Hawkesworth, a feminist orientation towards objectivity refutes the possibility of objective inquiry being attained from a privileged position (2006:96). Finlay (2003) also notes that a feminist reflexivity requires awareness on behalf of the researcher, specifically concerning positionality and interests, as discussed briefly above.

Mauthner and Doucet (2003) emphasize that there are degrees of reflexivity, and it is virtually impossible for researchers to be aware of them all, even if they are conscious of their own positionalities (425). Ultimately, we cannot know everything that influences our knowledge construction process, but a reflexive research practice ensures that as researchers, we locate ourselves in our analyses, thus approximating an ‘objective’ orientation.

Sources of Information During Pregnancy

As explained above, the qualitative component of my research seeks to scrutinize key sources of information available to women throughout their perinatal experiences. A variable available in the MES was used to establish a list of information sources to analyze (see Table 2.2). Respondents were asked: “During your pregnancy with ^baby's name, who or what was your most useful source of information about pregnancy, labour and birth? (PHAC 2009a:17). Women identified a variety of sources, including medical doctors, books, previous pregnancies, the advice of family and friends, the Internet, midwives, and nurses.

As the MES does not contain any qualitative responses to questions surrounding women’s preferred source of information, where appropriate, I have identified sources by other means, the justification for which I explain further below. It would have been useful, although methodologically problematic with such a large data set, to get feedback directly from women about *why* they preferred a particular source of information over others, and how they contemplated or negotiated different sources of information, particularly if they were faced with conflicting sources. Another limitation is that the MES does not distinguish information sources that were most useful in specific

situations: for example, in the event of a C-section. The following sections explain how I selected sources of information for my qualitative analysis.

Information from Physicians

Approximately 27% of women included in the study said that the most useful information they received during their pregnancy came from a medical doctor. This would include obstetricians, gynaecologists, family physicians, etc. It is not surprising that this is the most commonly cited information source among women in the MES, because results also show that physicians are the most likely maternity care providers. This is discussed further in subsequent chapters.

As mentioned above, since the MES does not contain any information about *why* or *how* the information source was useful to women, and because my methodology for this research does not contain any actual interviews with physicians, it is not possible to directly assess this information source. However, I evaluate information about C-sections available from the Society of Obstetricians and Gynaecologists of Canada (SOGC) and the College of Family Physicians of Canada (CFPC), since these two types of medical doctors care for the majority of expectant mothers—58% and 32% of pregnancies, respectively (PHAC 2009b). Because interviews were not conducted as part of this project, I will cautiously be using this information as a proxy for advice that may be given to women about these surgeries, in consideration of the body of literature on the complexities of guideline adherence. This research suggests that physicians' opinions do not necessarily align with the positions and policies of their professional associations (for examples, see Lugtenberg et al. 2014, Sewitch et al. 2007, and Haggard 2011).

Information from Books

According to findings from the MES, approximately 23% of women found books to be their most useful source of information during their pregnancy. Since the survey does not include any qualitative responses to determine exactly which books women found informative, I will be looking at four popular pregnancy books, focusing specifically on the sections that deal with C-sections. While analyzing so many books initially seemed like a daunting task, I was surprised to discover that in most of these books, the information provided on C-section was quite brief. For example, in *What to Expect When You're Expecting*, which is a 640-page book, very few pages directly addressed what to expect from C-sections.

Information from the Internet

Approximately 8% of the women who participated in the MES reported that the Internet was their most useful source of information during pregnancy. While this is a small proportion of women compared to the other data sources, the Internet is still a valuable qualitative data source to explore, because I suspect that if the MES were repeated today, many more women would cite the Internet as a valuable information source, compared to 2006-2007, when the survey was initially administered. While the Internet was widely available at the time of the survey, only approximately 67.5% of Canadians were actually using it in, compared to approximately 91% of Canadians in 2013 (Internet World Stats 2014).

Initially, I performed a Google search of the term 'C-section', because I was curious about what the top results would be. Not surprisingly, Wikipedia was the top result, followed by a few other popular pregnancy websites, including babycenter.com

and webmd.com. I look at each of these sources in detail. Interestingly, SOGC's page on C-section was a search hit that showed up on the first page of the results, which suggests that women may come across information from physicians via the Internet.

Analyzing potential internet sources for information pertaining to C-section is a bit of a daunting task, because there are numerable factors to consider, including the woman's own positionality (including sociocultural characteristics) and preferences which might act as determinants of the sites she frequents. However, given that I have no way of knowing the specific online sources that women find useful, I have done my best to select sources which I feel would be the most popular.

Ethics

Ethics clearance was required for this project since the quantitative portion of the study required using secondary data. A Secondary Use of Data form was submitted to The Carleton University Research Ethics board in early January 2015. This type of ethics application is only reviewed by the chair of the ethics board, and as such, the turnaround time is typically only 1-2 weeks. After a quick clarification regarding the data access, my ethics clearance was granted on January 23, 2015. The clearance was granted until May 31, 2015, at which time an extension was granted until May 31, 2016 with an Annual Status Report. Please note that both the original clearance and the clearance renewal are included for reference in Appendix B.

Notes for Chapter 2

¹ I intended to look at the top five best-sellers, but one of the titles, *What to Expect When You're Expecting*, currently holds both first and third place for the paperback and Kindle editions, respectively. Furthermore, the fifth title on the list is *Taking Charge of Your Fertility*, by Toni Weschler, which is a popular book about natural birth control (the fertility awareness method), pregnancy achievement, and reproductive health. This book does not address C-section, so I excluded it from my analysis. In lieu, I chose to look at a book marketed at men, the sixth Amazon's best-seller list: *Dude You're Going to be a Dad*.

Chapter 3: Quantitative Findings

This chapter details the results of the statistical analysis, which consists of both a descriptive and inferential exploration of the MES. The purpose of the quantitative analysis is threefold: (1) to assess the tendency towards C-section among certain sociodemographic groups; (2) to determine how satisfied women are with their role in decision making with their care providers; and (3) to identify the most valuable sources of information that women refer to for perinatal-related information, and to determine how satisfied women are with these. My goal is to use these findings to inform the qualitative portion of my study in order to gain a more holistic view of the risk discourses that women must navigate throughout their maternal care experiences. In turn, I hope to unpack the ways in which these risk discourses impact decision making during pregnancy. A detailed results table is presented for each of the descriptive and inferential model iterations, followed by a discussion of the findings.

Assessing the Tendency toward Caesarean Section

The following crosstabulations seek to address the first goal of quantitative analysis: to determine if there is a tendency towards C-section among certain sociodemographic groups. The tables assess three distinct binary dependent variables, which are analyzed by the following sociodemographic covariates: mother's age at the time of birth, mother's level of education, parity (i.e., primiparous meaning first birth vs. multiparous meaning women who had a previous birth), province of birth, size of geographic region, and household income. I present all three tables, followed by a discussion of each of the covariates and how the results differ across the three outcomes.

Vaginal birth versus C-section

Table 3.1 looks at the relationship between the birth type and two maternity care variables: the type of care provider, and women's most valuable source of information. There is an association between both independent variables and the birth type. Table 3.2 is a crosstabulation of the birth type against several sociodemographic variables. All of the variables included in Table 3.2 are associated with the type of birth, except the mother's level of education and the size of the geographic region in which the birth occurred. In both tables, the outcome compares women who had vaginal births to those who had C-sections. Due to sample size limitations, the C-section births include unplanned or emergency C-sections, regardless of whether vaginal birth was attempted, and planned C-sections, including both medical and elective surgeries.

Table 3.1. Distribution of Type of Birth by Selected Maternity Care Variables, Canada, MES, 2006-2007

COVARIATE	TYPE OF BIRTH			
	<u>Vaginal</u>		<u>Caesarean</u>	
	% (n)	CI 95%	% (n)	CI 95%
<i>Type of perinatal care provider*</i>				
OB/GYN	71.74 (2465)	70.19—73.24	28.26 (1004)	26.76—29.81
Other MD	76.35 (1861)	74.49—78.11	23.65 (568)	21.89—25.51
Midwife	78.99 (269)	74.13—83.15	21.01 (69)	16.85—25.87
Total	73.81 (4595)	72.65—74.88	26.19 (1641)	25.05—27.35
$\chi^2 = 20.7307$				
<i>Most useful source of information about pregnancy, labour, and birth*</i>				
Previous pregnancy	78.63 (839)	75.98—81.07	21.37 (220)	18.93—24.02
Family/friends	76.72 (528)	73.18—79.91	23.28 (155)	20.09—26.82
Medical doctor	69.01 (1107)	66.62—71.30	30.99 (512)	28.70—33.38
Midwife or doula	80.57 (231)	75.36—84.90	19.43 (54)	15.10—24.64
Nurse or Nurse Practitioner	79.08 (142)	71.54—85.04	20.92 (35)	14.96—28.46
Classes	74.53 (327)	69.84—78.72	25.47 (115)	21.28—30.16
Books	73.76 (1028)	71.28—76.10	26.24 (373)	23.90—28.72
Internet	70.21 (346)	65.62—74.43	29.79 (137)	25.57—34.38
Total	73.90 (4548)	72.72—75.05	26.10 (1601)	24.95—27.28
$\chi^2 = 48.2957$				

CI—confidence interval.

† Coefficient of variation between 16.6% and 33.3%.

‡ Coefficient of variation >33.3%.

Table 3.2. Distribution of Type of Birth by Selected Demographic and Socioeconomic Variables, Canada, MES, 2006-2007

COVARIATE	TYPE OF BIRTH			
	Vaginal		Caesarean	
	% (n)	CI 95%	% (n)	CI 95%
Mother's age*				
15-24	80.34 (931)	77.71—82.73	19.66 (224)	17.27—22.29
25-29	76.25 (1572)	74.23—78.16	23.75 (484)	21.84—25.77
30-34	71.73 (1480)	69.75—73.64	28.27 (603)	26.36—30.25
35+	66.76 (719)	63.73—69.65	33.24 (357)	30.35—36.27
Total	73.74 (4702)	72.59—74.87	26.26 (1668)	25.13—27.41
$\chi^2 = 62.4864$				
Mother's level of education				
Less than high school	75.51 (425)	71.48—79.14	24.49 (136)	20.86—28.52
High school graduate	75.55 (677)	72.49—78.38	24.45 (212)	21.62—27.51
Some post-secondary	74.70 (327)	69.92—78.95	25.30 (109)	21.05—30.08
Postsecondary	74.19 (1693)	72.30—75.99	25.81 (606)	24.01—27.70
Bachelor's degree	72.25 (1141)	69.83—74.55	27.75 (433)	25.45—30.17
Graduate degree	71.80 (418)	67.77—75.51	28.20 (162)	24.49—32.23
Total	73.77 (4681)	72.60—74.90	26.23 (1658)	25.10—27.40
$\chi^2 = 5.7252$				
Parity*				
Primiparous	70.44 (2054)	68.66—72.16	29.56 (849)	27.84—31.34
Multiparous	76.65 (2662)	75.13—78.10	23.35 (817)	21.90—24.87
Total	73.83 (4716)	72.68—74.96	26.17 (1666)	25.04—27.32
$\chi^2 = 31.5481$				
Province of birth*				
Newfoundland and Labrador	69.77 (196)	64.49—74.58	30.23 (81)	25.42—35.51
Prince Edward Island	66.65 (123)	62.47—70.59	33.35 (60)	29.41—37.53
Nova Scotia	69.64 (241)	65.42—73.55	30.36 (105)	26.45—34.58
New Brunswick	76.29 (229)	71.55—80.46	23.71 (71)	19.54—28.45
Québec	77.96 (959)	75.53—80.20	22.04 (269)	19.80—24.47
Ontario	72.42 (1360)	70.42—74.34	27.58 (523)	25.66—29.58
Manitoba	77.20 (279)	72.95—80.96	22.80 (80)	19.04—27.05
Saskatchewan	74.64 (253)	70.05—78.74	25.36 (87)	21.26—29.95
Alberta	73.00 (479)	69.64—76.12	27.00 (179)	23.88—30.36
British Columbia	70.18 (446)	66.63—73.50	29.82 (187)	26.50—33.37
Territories	83.92 (164)	80.65—86.72	16.08 (33)	13.28—19.35
Total	73.77 (4729)	72.62—74.89	26.23 (1675)	25.11—27.38
$\chi^2 = 27.2101$				
Size of geographic region				
Rural area	74.50 (1019)	71.96—76.88	25.50 (354)	23.12—28.04
Urban, population < 30,000	74.92 (929)	72.13—77.52	25.08 (306)	22.48—27.87
Urban, population 30-100,000	72.83 (421)	68.67—76.63	27.17 (156)	23.37—31.33
CMA, population < 500,000	73.11 (570)	69.70—76.27	26.89 (212)	23.73—30.30
CMA, population 500,000+	73.43 (1626)	71.53—75.25	26.57 (589)	24.75—28.47
Total	73.79 (4565)	72.61—74.93	26.21 (1617)	25.07—27.39
$\chi^2 = 1.5831$				
Household income*				
< \$30,000	76.77 (879)	74.09—79.24	23.23 (262)	20.76—25.91
\$30-49,999	73.83 (911)	71.16—76.35	26.17 (332)	23.65—28.84
\$50-79,999	74.36 (1287)	72.18—76.43	25.64 (457)	23.57—27.82
\$80-99,999	70.24 (541)	66.79—73.48	29.76 (223)	26.52—33.21
\$100,000+	72.25 (816)	69.41—74.92	27.75 (310)	25.08—30.59
Total	73.69 (4434)	72.50—74.86	26.31 (1584)	25.14—27.50
$\chi^2 = 11.6500$				

CI—confidence interval.

† Coefficient of variation between 16.6% and 33.3%.

‡ Coefficient of variation >33.3%.

Type of Caesarean Section

Tables 3.3 and 3.4 look at the relationship between the maternity care factors and sociodemographic characteristics of the women who had a C-section, respectively, assessing whether certain characteristics can predict whether the C-section was planned or unplanned. Planned C-sections include medical and elective surgeries. All unplanned C-sections are grouped together in the analysis, regardless of whether vaginal birth was attempted. The purpose of this variable is to unpack the nuanced differences between surgical birthing interventions which may have occurred in the throes of labour, where presumably women are limited in their ability to mull this decision over, and those where they may have had a bit more time to weigh options and potentially seek information from a variety of sources. The type of care provider is the only significant maternity care factor when crosstabulated against the type of C-section (Table 3.3), whereas mother's age and parity are the significant sociodemographic predictors of C-section (Table 3.4).

Table 3.3. Distribution of Planned vs. Unplanned C-Sections by Selected Maternity Care Variables, Canada, MES, 2006-2007

COVARIATE	TYPE OF CAESAREAN SECTION			
	Planned		Unplanned	
	% (n)	CI 95%	% (n)	CI 95%
<i>Type of perinatal care provider*</i>				
OBGYN	54.93 (550)	51.88—57.94	45.07 (454)	42.06—48.12
Other MD	47.76 (274)	43.55—51.99	52.24 (294)	48.01—56.45
Midwife	17.59 (12) †	10.56—27.85	82.41 (57)	72.15—89.44
Total	50.80 (836)	48.37—53.24	49.20 (805)	46.76—51.63
$\chi^2 = 44.6330$				
<i>Most useful source of information about pregnancy, labour, and birth*</i>				
Previous pregnancy	80.61 (179)	74.62—85.46	19.39 (41)	14.54—25.38
Family/friends	35.43 (53)	27.85—43.83	64.57 (102)	56.17—72.15
Medical doctor	62.84 (321)	58.27—67.20	37.16 (191)	32.80—41.73
Midwife or doula	20.07 (11) †	11.82—31.98	79.93 (43)	68.02—88.18
Nurse or Nurse Practitioner	52.56 (17) †	34.46—70.02	47.44 (18) †	29.98—65.54
Classes	23.34 (28) †	16.48—31.95	76.66 (87)	68.05—83.52
Books	42.52 (159)	37.32—47.90	57.48 (214)	52.10—62.68
Internet	40.50 (59)	32.75—48.75	59.50 (78)	51.25—67.25
Total	51.53 (827)	49.04—54.01	48.47 (774)	45.99—50.96
$\chi^2 = 197.9968$				

CI—confidence interval.

† Coefficient of variation between 16.6% and 33.3%. ‡ Coefficient of variation >33.3%.

Table 3.4. Distribution of planned vs. unplanned C-sections by selected demographic and socioeconomic variables, Canada, MES, 2006-2007

COVARIATE	TYPE OF CAESAREAN SECTION			
	Planned		Unplanned	
	% (n)	CI 95%	% (n)	CI 95%
Mother's age*				
15-24	30.74 (72)	24.60—37.66	69.26 (152)	62.34—75.40
25-29	47.03 (227)	42.32—51.80	52.97 (257)	48.20—57.68
30-34	54.69 (332)	50.66—58.66	45.31 (271)	41.34—49.34
35+	62.55 (224)	57.22—67.59	37.45 (133)	32.41—42.78
Total	51.25 (855)	48.84—53.66	48.75 (813)	46.34—51.16
$\chi^2 = 59.0994$				
Mother's level of education				
Less than high school	51.70 (66)	42.73—60.55	48.30 (70)	39.45—57.27
High school graduate	52.04 (113)	44.91—59.08	47.96 (99)	40.92—55.09
Some post-secondary	62.30 (63)	51.96—71.63	37.70 (46)	28.37—48.04
Postsecondary	51.01 (311)	46.93—55.16	48.95 (295)	44.84—53.07
Bachelor's degree	48.72 (211)	43.84—53.62	51.28 (222)	46.38—56.16
Graduate degree	51.83 (86)	43.99—59.58	48.17 (76)	40.42—56.01
Total	51.33 (850)	48.88—53.77	48.67 (808)	46.23—51.12
$\chi^2 = 6.0165$				
Parity*				
Primiparous	23.56 (198)	20.62—26.77	76.44 (651)	73.23—79.38
Multiparous	80.49 (657)	77.51—83.16	19.51 (160)	16.84—22.48
Total	51.31 (855)	48.90—53.71	48.69 (811)	46.29—51.10
$\chi^2 = 540.0416$				
Province of birth				
Newfoundland and Labrador	44.40 (37)	34.98—54.24	55.60 (44)	45.76—65.02
Prince Edward Island	58.00 (34)	50.18—65.43	42.00 (26)	34.57—49.82
Nova Scotia	55.37 (58)	46.96—63.48	44.63 (47)	36.52—53.04
New Brunswick	52.79 (38)	42.32—63.02	47.21 (33)	36.98—57.68
Québec	52.34 (138)	46.80—57.83	47.66 (131)	42.17—53.20
Ontario	51.19 (266)	47.21—55.16	48.81 (257)	44.84—52.79
Manitoba	57.37 (46)	47.31—66.86	42.63 (34)	33.14—52.69
Saskatchewan	41.14 (37)	32.54—50.33	58.86 (50)	49.67—67.46
Alberta	49.01 (87)	41.97—56.08	50.99 (92)	43.92—58.03
British Columbia	51.50 (96)	44.91—58.04	48.50 (91)	41.96—55.09
Territories	64.40 (21)	54.94—72.86	35.60 (12)	27.14—45.06
Total	51.16 (858)	48.76—53.56	48.84 (817)	46.44—51.24
$\chi^2 = 4.7702$				
Size of geographic region				
Rural area	52.27 (190)	46.64—57.83	47.73 (164)	42.17—53.36
Urban, population < 30,000	53.93 (163)	47.56—60.17	46.07 (143)	39.83—52.44
Urban, population 30-100,000	51.76 (79)	43.41—60.01	48.24 (77)	39.99—56.59
CMA, population < 500,000	42.05 (92)	35.37—49.04	57.95 (120)	50.96—64.63
CMA, population 500,000+	52.17 (305)	48.11—56.20	47.83 (284)	43.80—51.89
Total	51.23 (829)	48.73—53.72	48.77 (788)	46.28—51.27
$\chi^2 = 7.6767$				
Household income				
< \$30,000	48.66 (124)	42.29—55.07	51.34 (138)	44.93—57.71
\$30-49,999	53.96 (181)	48.41—59.41	46.04 (151)	40.59—51.59
\$50-79,999	47.48 (220)	42.82—52.18	52.52 (237)	47.82—57.18
\$80-99,999	52.43 (119)	45.56—59.21	47.57 (104)	40.79—54.44
\$100,000+	54.35 (168)	48.74—59.85	45.65 (142)	40.15—51.26
Total	51.16 (812)	48.68—53.64	48.84 (772)	46.36—51.32
$\chi^2 = 5.5712$				

CI – confidence interval.

† Coefficient of variation between 16.6% and 33.3%.

‡ Coefficient of variation >33.3

Reason for Planned Caesarean Section

Finally, the reason for planned C-section is a variable that compares whether planned C-sections were performed for medical or non-medical reasons. Here, all C-sections that were planned for medical reasons are grouped together, and these are compared to all C-sections that were planned for non-medical or elective reasons. Table 3.5 presents the reasons for planned C-sections and the type of care provider. Table 3.6 contains the crosstabulation results of the reason for planned C-section against the same sociodemographic variables as above. Parity is the only statistically significant covariate for this outcome variable.

Table 3.5. Distribution of Reason for Planned C-Sections by Type of Perinatal Care Provider, Canada, MES, 2006-2007

COVARIATE	REASON FOR PLANNED CAESAREAN SECTION			
	<u>Medical</u>		<u>Non-medical</u>	
	% (n)	CI 95%	% (n)	CI 95%
<i>Type of perinatal care provider</i>				
OBGYN	87.75 (484)	84.60—90.33	12.25 (66)	9.674—15.40
Other MD	83.57 (227)	78.47—87.65	16.43 (47)	12.35—21.53
Midwife	100.0 (12)	-----	-----	-----
Total	86.70 (723)	84.11—88.93	13.30 (113)	11.07—15.89
$\chi^2 = 4.8558$				

CI – confidence interval.

† Coefficient of variation between 16.6% and 33.3%.

‡ Coefficient of variation >33.3%.

Unfortunately due to the limited sample size of women who had planned C-sections, it was not possible to disaggregate the outcome further to include a crosstabulation of women's most valuable source of information.

Table 3.6. Distribution of Reason for Planned C-Sections by Selected Demographic and Socioeconomic Variables, Canada, MES, 2006-2007

COVARIATE	REASON FOR PLANNED CAESAREAN SECTION			
	Medical		Non-medical	
	% (n)	CI 95%	% (n)	CI 95%
Mother's age				
15-24	81.97 (57)	70.19—89.77	18.03 (15) †	10.23—29.81
25-29	87.16 (199)	81.64—91.20	12.84 (28) †	8.804—18.36
30-34	85.44 (285)	80.86—89.08	14.56 (47)	10.92—19.14
35+	89.59 (199)	84.57—93.11	10.41 (25) †	6.895—15.43
Total	86.76 (740)	84.24—88.98	13.21 (115)	11.02—15.76
$\chi^2 = 3.3743$				
Mother's level of education				
Less than high school	83.35 (51)	71.89—90.74	16.65 (15) †	9.261—28.11
High school graduate	78.72 (91)	69.15—85.92	21.28 (22) †	14.08—30.85
Some post-secondary	84.80 (55)	72.45—92.21	15.20 (8) †	7.795—27.55
Postsecondary	88.35 (275)	84.02—91.63	11.65 (36)	8.373—15.98
Bachelor's degree	89.12 (187)	84.04—92.73	10.88 (24) †	7.270—15.96
Graduate degree	88.40 (76)	78.91—93.95	11.60 (10) †	6.047—21.09
Total	86.73 (735)	84.17—88.94	13.27 (115)	11.06—15.83
$\chi^2 = 6.0165$				
Parity*				
Primiparous	97.47 (193)	93.74—99.00	2.530 (5) ‡	0.999—6.259
Multiparous	83.33 (546)	80.04—86.16	16.67 (111)	13.84—19.96
Total	86.66 (739)	84.09—88.86	13.34 (116)	11.14—15.91
$\chi^2 = 26.6116$				
Province of birth				
Newfoundland and Labrador	44.40 (37)	34.98—54.24	55.60 (44)	45.76—65.02
Prince Edward Island	58.00 (34)	50.18—65.43	42.00 (26)	34.57—49.82
Nova Scotia	55.37 (58)	46.96—63.48	44.63 (47)	36.52—53.04
New Brunswick	52.79 (38)	42.32—63.02	47.21 (33)	36.98—57.68
Québec	52.34 (138)	46.80—57.83	47.66 (131)	42.17—53.20
Ontario	51.19 (266)	47.21—55.16	48.81 (257)	44.84—52.79
Manitoba	57.37 (46)	47.31—66.86	42.63 (34)	33.14—52.69
Saskatchewan	41.14 (37)	32.54—50.33	58.86 (50)	49.67—67.46
Alberta	49.01 (87)	41.97—56.08	50.99 (92)	43.92—58.03
British Columbia	51.50 (96)	44.91—58.04	48.50 (91)	41.96—55.09
Territories	64.40 (21)	54.94—72.86	35.60 (12)	27.14—45.06
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Urban, population 30-100,000	51.76 (79)	43.41—60.01	48.24 (77)	39.99—56.59
CMA, population < 500,000	42.05 (92)	35.37—49.04	57.95 (120)	50.96—64.63
CMA, population 500,000+	52.17 (305)	48.11—56.20	47.83 (284)	43.80—51.89
Total	51.23 (829)	48.73—53.72	48.77 (788)	46.28—51.27
$\chi^2 = 7.6767$				
Household income				
< \$30,000	48.66 (124)	42.29—55.07	51.34 (138)	44.93—57.71
\$30-49,999	53.96 (181)	48.41—59.41	46.04 (151)	40.59—51.59
\$50-79,999	47.48 (220)	42.82—52.18	52.52 (237)	47.82—57.18
\$80-99,999	52.43 (119)	45.56—59.21	47.57 (104)	40.79—54.44
\$100,000+	54.35 (168)	48.74—59.85	45.65 (142)	40.15—51.26
Total	51.16 (812)	48.68—53.64	48.84 (772)	46.36—51.32
$\chi^2 = 5.5712$				

CI – confidence interval. † Coefficient of variation between 16.6% and 33.3%.

‡ Coefficient of variation >33.3%.

The following sections discuss each of the covariates in the tables above, fleshing out the sociodemographic contexts within which C-sections happen in Canada.

Understanding the Sociodemographic Determinants of C-Section

Maternal Age

According to the findings in Table 3.2, as women age, they are less likely to have a vaginal birth. Women aged 35 and over are the most likely to undergo a C-section, with approximately one third of births ending in C-section, compared to only 20% among women aged 15 to 24. These findings are consistent with findings from previous research that suggests that maternal age is a key determinant in the likelihood of C-section.

Interestingly, women are also increasingly likely to undergo a planned C-section as they age. Table 3.4 shows that the proportion of women who undergo planned surgical births increases steadily with age. Nearly two-thirds of C-sections among women aged 35 and over are planned compared to only one third of C-sections among women aged 15-24. Among women whose surgical deliveries were planned, whether these were scheduled for medical or non-medical reasons did not differ by maternal age. This finding is surprising, considering previous research that suggests that advanced maternal age is associated with a range of adverse pregnancy outcomes (Kenney et al. 2013) that would presumably highlight the significance of medically necessary C-sections as women age.

Mother's Level of Education

Surprisingly, mother's level of education was not predictive of birth type, whether C-section deliveries were planned or unplanned, or whether the planned surgeries were elective or medically necessary. Previous research on the association between C-section and maternal education is conflicting. Some findings suggest that there is a higher rate of

planned C-section delivery in women with post-secondary education (Gilbert et al. 2008), while others show that women in lower-affluent areas are significantly more likely to have caesarean deliveries (Leeb et al. 2007). I expected education to be significant, signalling a spurious or intervening relationship between economic affluence and the tendency towards C-section via mother's education. I theorized that education may be an indirect cause of this relationship, since income and education are typically positively correlated, and I expected to find that women with more education are less likely to undergo C-section, perhaps because they may be more in tune with the risks associated with birthing interventions, particularly the morbidity associated with C-section. Findings from international research on this subject do support this hypothesis. For example, higher education as a determinant of C-section has been established in Nepal (Prakash and Neupane 2014) and Iran (Maharlouei et. al 2013; Ghotbi et. al 2014). The lack of significance could indicate that mother's educational attainment is simply not a relevant determinant of C-section in the Canadian context. This could be because the educational gradient is less pronounced in the Western world than it is in other countries.

Alternative reasons for education's lack of significance could have to do with the context of health administration in a Canadian context. A study from the United States found that higher C-section rates are only partially explained by patient characteristics, but are greatly influenced by non-medical factors. These include provider density, the capacity of the local health care system, and malpractice pressure (Baicker, Buckles and Chandra 2006). Physician's use of defensive medicine as a determinant of C-section in the United States has also been widely documented (see Dubay, Kaestner and Waidmann 1999, and Sloan 1998 as examples). Given the cultural and political dissimilarities

between the American and Canadian health systems, it is difficult to posit whether the same would be true in Canada; this is an area of the literature that requires further investigation.

Birth Parity

I was not surprised to learn that parity—whether the woman had been pregnant previously—was associated with all three of my covariates. Table 3.2 looks at the difference between instances of vaginal birth and C-section based on birth parity. I found that women who had not had a previous delivery (primiparous women) were more likely to deliver by C-section. Nearly one third of first time mothers delivered surgically, compared to only 23% of women who had previous children. This finding is consistent with previous research, which suggests that first-time mothers are more likely to experience fears surrounding pregnancy and childbirth, and that this is an important determinant of C-section among first-time mothers (Matinnia et al. 2015).

Table 3.4 shows the relationship between birth parity and whether C-sections were planned or unplanned. Approximately three-quarters of C-sections are unplanned among first-time moms, compared to only 20% among women with previous births. Based on the national C-section rate of 27%, it is safe to assume that about one quarter of multiparous women gave birth surgically for their previous birth, so I suspect that the high proportion of planned C-sections among multiparous women is at least partly attributable to persistent doubts surrounding the safety of vaginal birth after C-section (VBAC). VBAC is the term used when a woman gives birth vaginally after having had at least one baby born by C-section (BabyCenter Canada 2010). VBACs have been controversial since the 1980s when prominent reports of uterine rupture, particularly

when labour was induced, caused much debate surrounding the safety and risks associated with delivering vaginally after a C-section (Kotaska 2012).

This theory is supported by the finding that among multiparous women who had a planned C-section (Table 3.5), only 17% were performed for non-medical reasons, compared to 83% which were planned for medical reasons. This differs from the rates among first-time mothers with planned C-sections: nearly all of them (97%) reported that their delivery was scheduled surgically for medical reasons. The difference between the proportions of primi- and multiparous women who had planned C-sections for medical reasons implies that mothers who had previous births are having more elective C-sections than first time mothers.

Returning to the VBAC phenomenon, I can only theorize that this could be explained by SOGC's official position that VBAC is safe for most women (SOGC *N.d.a*). Therefore, if a multiparous woman requests a C-section after having previously had one, this would likely be considered elective, perhaps skewing the results to appear as though multiparous women are more likely to have elective C-sections. Unfortunately, there is no variable available on the MES which looks at the type of delivery women had for previous pregnancies, so it is not possible to assess the relevance of VBAC as it relates to this study, though I suspect it is highly relevant, since the repeat C-section rate in Canada in 2006-2007 was 82.5% (CIHI 2015c). Another possibility is that women who had previous C-sections are intentionally avoiding VBACs, which could speak to several possibilities, including a positive C-section experience or fear of vaginal birth in general or after a previous C-section specifically. The MES did not include follow-up questions that explored women's reasons for elective C-section, so it is only possible to speculate

about potential reasons. As noted above, previous international research suggests that maternal fear of vaginal birth is the strongest determinant of elective C-section among primiparous women (see Matinnia et al. 2015), but little research exists looking at the reasons for C-sections among multiparous women.

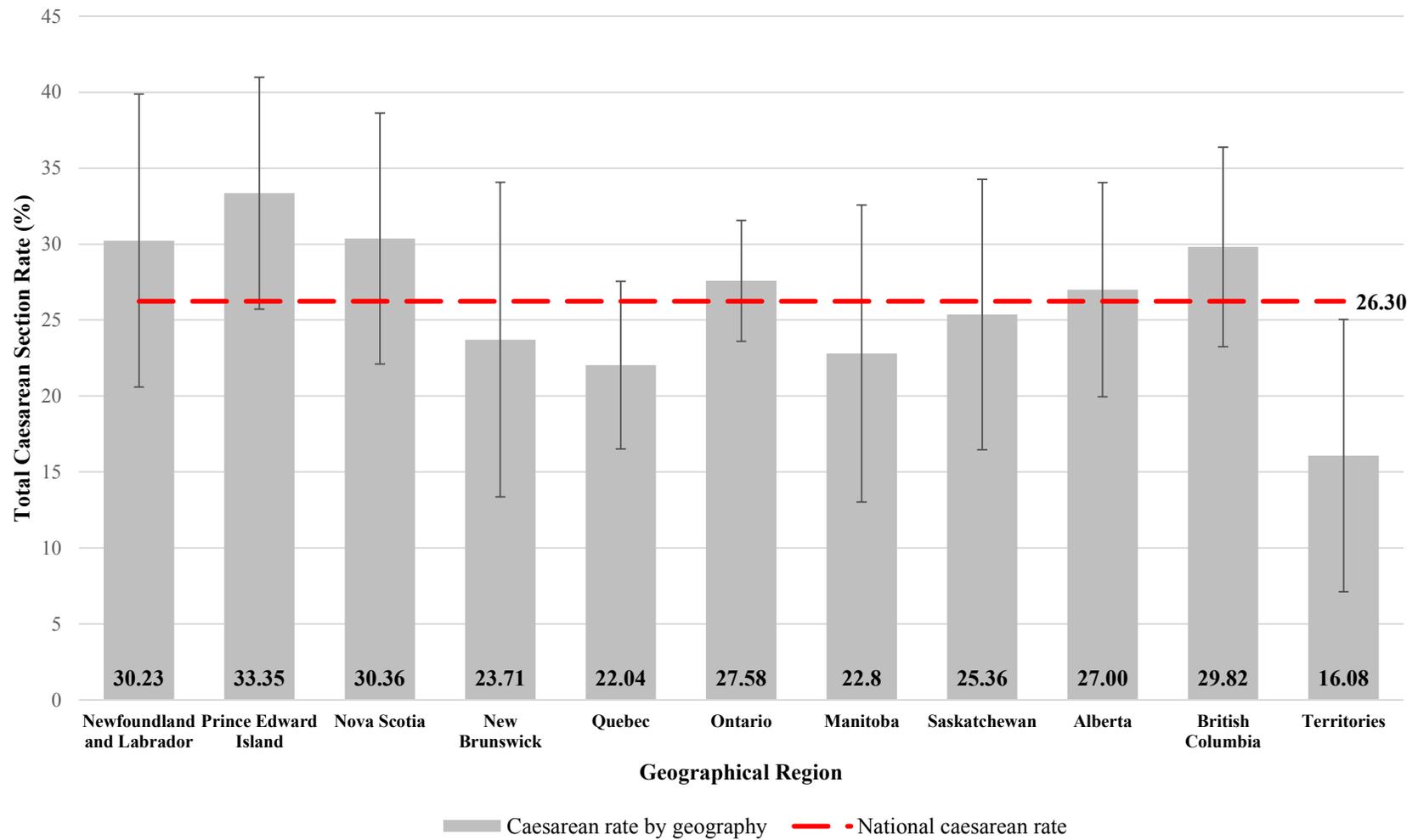
Province of Birth

The province or territory of birth was also a predictor of instances of C-section. Figure 3.1 shows the total C-section rate across Canada. The highest proportion of women giving birth via C-section was in Prince Edward Island (33%), compared with a rate of only 16% in the Territories, where there is the lowest C-section rate in Canada.

In contrast, Atlantic Canada a much higher C-section rate than the national average, with the exception of New Brunswick. Figure 3.1 shows that Newfoundland and Labrador and Nova Scotia each have C-section rates of approximately 30%, with Prince Edward Island's rate sitting at over 33% at the time of the survey, a difference of over 7% greater than the national average. Surprisingly, there is no existing research to explore the possible reasons for this, despite the fact that C-section delivery was established as a risk factor for developing Type I diabetes in Newfoundland and Labrador specifically, which is known to have the highest incidence of the disease worldwide (Phillips et. al 2012).

The contexts of the provincial health systems of the Atlantic provinces could explain why their C-section rates are higher than the national average. For instance, according to the CMA (2015), there were more physicians per capita in Newfoundland and Nova Scotia than in any other province. Considered in tandem with the fact that midwifery care in Atlantic Canada is less widely available than in other regions in

Figure 3.1. Total Caesarean Section Rate by Geographical Region, Canada, MES, 2006-2007



Canada, and it is plausible that there is less access to low-intervention maternity care for women in these provinces, which may explain the high rates of C-section we observe.

Presently, midwifery is regulated in Nova Scotia (as of March 2009), in New Brunswick (as of August 2010), and in Newfoundland and Labrador (as of June 2010) (Canadian Midwifery Regulators Consortium 2013). At the time of the MES, therefore, women in these provinces did not have access to midwifery care services. Midwifery is still unregulated in Prince Edward Island, which interestingly is the province with the highest C-section rate in Canada (33.35%).

The rates of C-section between those from the MES and CIHI's 2013-2014 discharge database do differ slightly, with some provinces such as Newfoundland and Labrador remaining relatively consistent, with others, such as British Columbia and New Brunswick seeing an increase of about 3% respectively. This likely indicates that trends have changed in the past several years since the MES data was collected. Unfortunately, CIHI's database does not contain data on the 2006-2007 total C-section rates, so it is not possible to compare the MES findings to the actual discharge database to assess their accuracy.

Instances of planned versus unplanned C-section, and medical versus elective C-sections did not differ by province or territory.

Household Income

Household income was only predictive of whether the delivery was vaginal or surgical (Table 3.3), and was not a substantive difference. My results do not show a linear relationship between income and the proportion of women given birth via C-section. However, the MES data tables published by PHAC (2009b:128) simply compare women

whose households fall at or below the low income cut-off (LICO) to those who fall above the LICO. These results show that the proportion of women giving birth via C-section is approximately 4.5% higher among women whose household income is above the LICO (22.8% and 27.2%, respectively), which is contradictory to the conclusions drawn by Leeb and her colleagues (2007). Perhaps this is because Leeb's research relied on ecological measures of economic affluence, unlike the MES, with which we are able to assess the association between household income and C-section tendency using information collected at the individual level.

Summary: What are the Sociodemographic Determinants of C-Section?

While the descriptive analysis I have just highlighted has explored the differences between C-sections that were unplanned, planned for medical reasons, and elective, I initially sought out to assess the tendency towards C-section more broadly. The purpose of assessing the total instance of surgical births among certain sociodemographic groups has been to provide a context for the analysis of my main research questions, which ultimately seek to address the gaps in the current literature, as articulated by Lupton and Schmied: “[t]here are surprisingly few sociological studies into women’s experiences of Caesarean sections” (2013:83). The following list provides a concise recap of the key findings of this portion of my analysis:

- As a woman ages, she is increasingly likely to have a C-section
- First-time mothers are more likely to have C-sections
- Women who reside in one of Canada’s territories or Quebec are less likely to have C-sections, while women in Atlantic Canada are more likely

- Women with household incomes less than \$30,000 per year are least likely to have C-sections, contrary to previously published research which found that women who lived in neighbourhoods of low economic affluence had a higher tendency towards C-section

As mentioned above, my intention in identifying the sociodemographic characteristics that act as determinants of C-section is to contextually inform the rest of my quantitative analysis. The next section looks women's satisfaction with their involvement in decision making throughout their maternal care experiences.

Satisfaction with Involvement in Decision Making

The results of the following logistic regression models directly address one of my research questions: How satisfied are women with the contemporary prenatal model in terms of their involvement in decision making throughout their pregnancies? The models look at women's satisfaction with their involvement in decision making with their care provider (during pregnancy, labour and birth, and the immediate postpartum experience). While models in this section look at the same outcome, they differ slightly in terms of the sample of women included in each. The first model looks at all women who gave birth either vaginally or via C-section (Table 3.7; $n=4,563$), whereas the second looks exclusively at women who delivered via C-section (Table 3.8; $n=1,252$), comparing whether the surgical intervention was planned or unplanned.

The rationale for dividing the sample between two models in this way is to make the detailed comparison between planned and unplanned C-sections without losing the ability to talk about the broader differences between vaginal birth and C-section in terms of decision making. Detailed explanations of the results of the models follow.

Likelihood of Being ‘Very Satisfied’ (All Deliveries)

Table 3.7. Logistic Regression Results: Mother’s Satisfaction with Involvement in Decision Making, All Deliveries, Canada, MES, 2006-2007 (n=4,563)

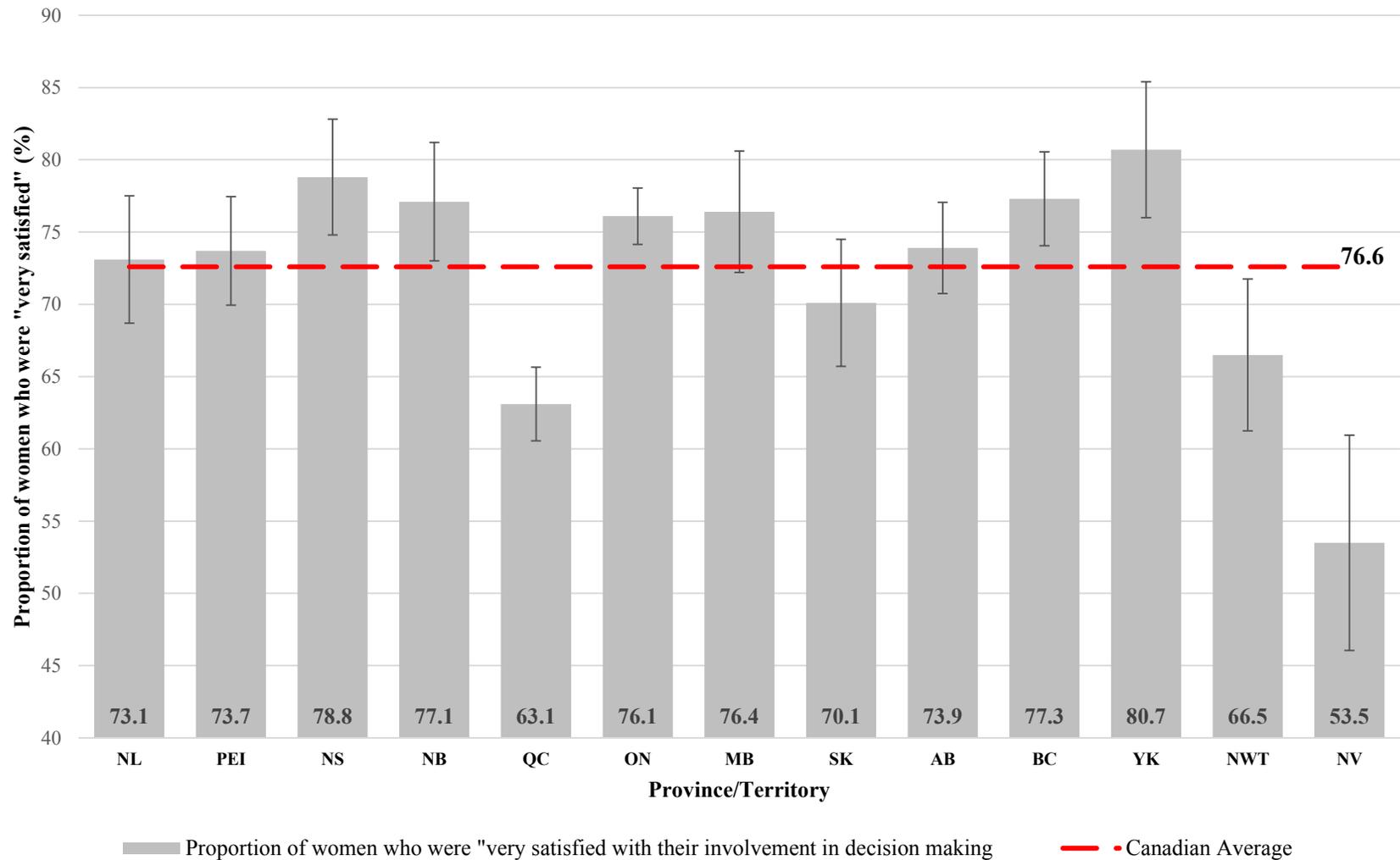
Satisfaction with decision making (all deliveries)	Weighted Model		Unweighted Model	
	Odds Ratio	95% CI	Odds Ratio	95% CI
Age group				
15-24 (ref)	-----	-----	-----	-----
25-29	0.89	0.70—1.13	0.90	0.73—1.12
30-34	0.99	0.76—1.27	0.99	0.78—1.25
35+	0.95	0.71—1.28	0.96	0.73—1.26
Education				
No postsecondary (ref)	-----	-----	-----	-----
Any postsecondary	0.96	0.78—1.17	0.99	0.82—1.20
Region of birth				
Ontario (ref)	-----	-----	-----	-----
Atlantic Canada	1.04	0.84—1.29	1.02	0.82—1.27
Quebec	0.57*	0.47—0.69	0.56*	0.46—0.68
Manitoba/Saskatchewan/Territories	0.82	0.65—1.04	0.80	0.64—1.00
Alberta	1.01	0.79—1.29	0.98	0.76—1.26
British Columbia	1.12	0.86—1.46	1.15	0.89—1.50
Census dissemination area				
Non-CMA (ref)	-----	-----	-----	-----
Small CMA	0.98	0.78—1.23	0.95	0.77—1.17
Large CMA	0.93	0.79—1.09	0.91	0.78—1.08
Household income				
<\$30,000 (ref)	-----	-----	-----	-----
\$30-49,000	1.07	0.84—1.36	1.10	0.88—1.37
\$50-79,000	1.03	0.80—1.32	1.05	0.85—1.30
\$80-99,000	0.99	0.74—1.31	1.02	0.78—1.33
\$100,000+	1.01	0.78—1.32	1.10	0.86—1.41
Perinatal care provider				
OBGYN (ref)	-----	-----	-----	-----
Other physician	1.09	0.93—1.27	1.07	0.92—1.24
Midwife	2.19*	1.27—3.79	2.17*	1.24—3.78
Other	1.80	0.90—3.59	0.93	0.55—1.56
Most useful source of information				
Physician (ref)	-----	-----	-----	-----
Family or friends	0.50*	0.39—0.64	0.50*	0.40—0.64
Midwife or doula	1.16	0.66—2.04	1.01	0.57—1.79
Nurse or Nurse Practitioner	0.68	0.43—1.08	0.62*	0.42—0.93
Classes	0.73*	0.56—0.96	0.69*	0.53—0.90
Books	0.57*	0.46—0.69	0.54*	0.45—0.65
Internet	0.49*	0.38—0.64	0.51*	0.40—0.64
Type of birth				
Vaginal delivery (ref)	-----	-----	-----	-----
Caesarean delivery	0.92*	0.79—1.08	0.9	0.95—1.28
Parity				
Primiparous (ref)	-----	-----	-----	-----
Multiparous	1.10	0.94—1.27	1.10	0.95—1.28
Constant	4.54*	3.28—6.27	4.44*	3.30—5.97
Model fit statistics	F-adjusted mean residual test: F = 0.38 p = 0.94		Pseudo R ² = 0.04 Hosmer-Lemeshow χ^2 = 2.44 Prob > χ^2 = 0.96	

*p ≤ 0.05

Table 3.7 contains the results of the logistic regression model which includes the entire sample of women. Weighted and unweighted statistics are available for all of the predictor variables. The most important predictors of satisfaction were geographical region, specifically for women in Quebec, the type of care provider, and women's preferred source of pregnancy-related information. Women in Quebec were 57% less likely than women in Ontario to be very satisfied with their involvement in decision making with their providers. This is an interesting finding, since Quebec is one of the provinces with a total C-section rate above the national average. Figure 3.2 uses data from the published MES data tables (PHAC 2009b) to show the proportion of women in each province and territory who reported being "very satisfied" with their personal involvement in decision making, compared to the Canadian average. Four regions were less likely to be satisfied: Quebec, Saskatchewan, the Northwest Territories, and Nunavut.

Not surprisingly, the type of maternal care provider was also a predictor of satisfaction with involvement in decision making. Women under the care of a midwife were more than twice as likely to be satisfied with their role in decision making compared to women who were patients of an obstetrician/gynaecologist (OBGYN). I expected this sort of result, considering the vast body of literature that questions *which* decisions patients should be involved in in patient-physician encounters, and *how* to involve them (Wirtz, Cribb and Barber 2005). It always struck me as interesting that physicians may actually contest that patients should be involved in *all* decisions. But Shaw (2013) points out that often women are offered various options only where menial decisions are concerned, giving the appearance of control over one's care, which she

Figure 3.2. Proportion of Women who were “Very Satisfied with their Involvement in Decision Making, Canada, MES, 2006-2007



refers to as false choices. A recurring theme in medical literature surrounding decision making encounters with physicians concerns the problems with the patriarchal model of medical dominance over patients (Zadoroznyj 2001). Many studies focus on alternative models and how to disrupt the notion of medical dominance in decision making encounters. The medical dominance model is completely opposite to how midwives as care providers approach decision making encounters, where women are always considered the ultimate decision maker, with the midwife's role being to inform and support the woman in this task (Jefford et al. 2010). This would explain why midwifery patients seem to be much more content with their role in decision making encounters.

Women's preferred source of information was also significant in predicting satisfaction with involvement in decision making for those who favoured family and friends, classes, books, and the Internet, over information provided by a medical doctor. Women who relied on information from data sources other than a physician were typically less likely to report being very satisfied with their role in decision making. I expected this result, since these women may presumably be aware of alternative options available to them that perhaps their care provider had not emphasized, therefore affecting their level of satisfaction with their role in decision making.

The relationship between information sources and decision making is one that would benefit from additional qualitative exploration, perhaps focusing on in-depth questions about which specific sources of information women found to be most useful, how those may have impacted the decisions they made about their care, and whether their care providers were supportive of those. It would also be fascinating to see whether women encountered any conflicting information between the sources they consulted.

Multinomial logistic regression modelling was attempted to better understand the complexities within the relationship between sources of information and the *level* of satisfaction, but unfortunately the sample size of the survey would not allow for comparison of groups beyond a basic binary grouping ('very satisfied' compared to 'less than very satisfied').

Finally, the model presented in Table 3.7 reveals that women who had a C-section were slightly less likely to be very satisfied with their involvement with decision making than women who had a vaginal birth. This finding is of particular relevance to my research, as it directly addresses my overarching goal of exploring some of the sociodemographic and contextual factors behind the alarming national C-section rate. If women who have C-sections are not entirely satisfied with their involvement in decision making, we have yet another reason to be concerned with the increasing rate of surgical births in Canada, because an increasing number of women will potentially feel alienated from decision making regarding their own maternity care. The next model looks exclusively at women who had C-sections, so it will be interesting to see whether the satisfaction level differs based on whether the surgical delivery was planned or not.

Likelihood of Being 'Very Satisfied' (Caesarean Deliveries)

Table 3.8 contains the results of a logistic regression model nearly identical to that in Table 3.7, but this iteration only includes women who delivered via caesarean section. In this iteration, being a resident of Quebec, or citing friends and family as the preferred source of information were the only statistically significant predictors of being very satisfied with one's involvement in decision making. Similar to the previous model which included all births, women in Quebec were about half as likely to be very satisfied with

Table 3.8. Logistic Regression Results: Mother's Satisfaction with Involvement in Decision Making, Caesarean Deliveries, Canada, MES, 2006-2007 (n=1,252)

Satisfaction with decision making (C-sections)	Weighted Model		Unweighted Model	
	Odds Ratio	95% CI	Odds Ratio	95% CI
Age group				
15-24 (ref)	-----	-----	-----	-----
25-29	0.68	0.39—1.19	0.73	0.46—1.16
30-34	0.77	0.43—1.39	0.79	0.49—1.28
35+	0.61	0.32—1.18	0.72	0.42—1.21
Education				
No postsecondary (ref)	-----	-----	-----	-----
Any postsecondary	0.99	0.66—1.49	1.12	0.78—1.60
Region of birth				
Ontario (ref)	-----	-----	-----	-----
Atlantic Canada	0.88	0.59—1.30	0.83	0.55—1.24
Quebec	0.46*	0.31—0.68	0.43*	0.29—0.64
Manitoba/Saskatchewan/Territories	0.82	0.52—1.29	0.89	0.57—1.40
Alberta	0.72	0.44—1.16	0.71	0.45—1.14
British Columbia	0.94	0.58—1.52	0.96	0.60—1.54
Census dissemination area				
Non-CMA (ref)	-----	-----	-----	-----
Small CMA	1.42	0.89—2.25	1.17	0.77—1.77
Large CMA	1.09	0.80—1.48	1.01	0.74—1.38
Household income				
<\$30,000 (ref)	-----	-----	-----	-----
\$30-49,000	0.72	0.44—1.16	0.96	0.62—1.49
\$50-79,000	0.94	0.58—1.54	1.11	0.72—1.69
\$80-99,000	0.91	0.52—1.61	1.02	0.61—1.70
\$100,000+	0.92	0.54—1.56	1.08	0.67—1.75
Perinatal care provider				
OBGYN (ref)	-----	-----	-----	-----
Other physician	1.17	0.85—1.60	1.07	1.80—1.44
Midwife	0.93	0.32—2.71	0.82	0.32—2.14
Other	1.34	0.14—12.84	1.51	0.38—5.94
Most useful source of information				
Physician (ref)	-----	-----	-----	-----
Family or friends	0.47*	0.28—0.78	0.53*	0.34—0.83
Midwife or doula	1.39	0.45—4.32	1.26	0.42—3.74
Nurse or Nurse Practitioner	0.84	0.29—2.46	0.83	0.34—1.98
Classes	1.05	0.59—1.88	0.92	0.55—1.54
Books	0.70	0.48—1.03	0.65*	0.46—0.91
Internet	0.65	0.40—1.06	0.70	0.44—1.11
Type of C-section				
Planned (ref)	-----	-----	-----	-----
Unplanned	0.76	0.52—1.10	0.73	0.54—1.00
Parity				
Primiparous (ref)	-----	-----	-----	-----
Multiparous	1.14	0.77—1.69	1.14	0.82—1.60
Constant	6.23*	2.84—13.63	5.15*	2.76—9.56
Model fit statistics	F-adjusted mean residual test: F = 1.30 p = 0.23		Pseudo R ² = 0.04 Hosmer-Lemeshow χ^2 = 12.47 Prob > χ^2 = 0.13	

*p ≤ 0.05

their involvement in decision making, compared to women in Ontario. Women from Quebec consistently stand out in my analysis, and I suspect that this may be related to the province's controversial two-tiered health care system. I explore this concept in more detail and discuss the implications of the growth of privatized health care in Quebec in Chapter 6. Finally, although the results were not statistically significant, the region of birth overall shows an interesting fact: that women in all regions were less likely to be very satisfied than those in Ontario. It would be interesting to further explore this concept to see whether there is a difference between the provinces in terms of women's level of satisfaction with their care on more of a continuum. Health care politics could plausibly affect women's satisfaction with care, which may explain why these differ by region.

Consistent with the first model which looked at all women, this iteration also revealed that among women who had a C-section, those whose preferred source of information was family and friends were about half as likely to be satisfied with their role in decision making compared to women who received their information from a physician. Perhaps this is because the biomedical model of birth is the most prominent, so women who get information from sources *other* than the expert in biomedical birth—physicians—may feel as though they were not entirely prepared for the outcomes of their birth: in this case, C-section. Another explanation is that perhaps they were dissatisfied with the information they received from their care provider in the first place, which is what led them to seek information from family and friends.

I have been theorizing this particular finding quite a lot, as it implies that perhaps women who draw specifically on the experiences of C-section of others may have an expected outcome, be it to have a C-section or to avoid a C-section, and perhaps the

realities of their labours and deliveries are not meeting those expectations. For example, consider the following hypothetical situation: A woman draws on a friend's negative experience with C-section, and decides that she wants a minimal-intervention birth in hospital. However, she develops complications during her labour, and under emergency circumstances she delivers via caesarean section. After the fact, she reflects on this experience, and since it did not have her desired outcome, she feels unsatisfied with her role in the decision making that led to the C-section, since it was not what she initially wanted. This is another instance where more qualitative research into the nuanced accounts of women's experiences during labour and delivery, and what exactly they felt was lacking in their role as decision makers, would be necessary to draw concrete conclusions.

Summary: How Satisfied Are Women with their Involvement in Decision Making?

The purpose of this section has been to highlight the quantitative findings that answer the following research question: How satisfied are women with the contemporary prenatal model in terms of their involvement in decision making processes throughout their pregnancies, labour and delivery, and postpartum experiences? The following list provides a concise recap of the key findings of this portion of my analysis:

- Women who gave birth in Quebec were the least likely to report being very satisfied with their involvement in decision making
- Midwifery patients were over twice as likely to be very satisfied with their involvement in decision making
- Women whose preferred source of information came from family or friends, classes, books, and the Internet were much less likely to be satisfied with their

involvement in decision making than women who got their information from a physician

This last point is particularly relevant to the next portion of my analysis, which looks more closely at women's satisfaction with the information provided to them by their care provider.

Satisfaction with Information Provided by Care Providers

The results of this analysis address my questions of women's satisfaction with the information they receive from their primary care providers. The next two models look at this explicitly, differing slightly in terms of the sample of women included in each. The first model looks at all women who gave birth either vaginally or via C-section (Table 3.9; $n=4,573$), whereas the second looks exclusively at women who delivered via C-section (Table 3.10; $n=1,255$), comparing whether the surgical intervention was planned or unplanned.

Likelihood of Being 'Very Satisfied' (All Deliveries)

Table 3.9 explores the likelihood of being very satisfied with the information received from care providers, and it includes all births. The results suggest that late maternal age, geographic region, prenatal care provider, and the source of information that women find most useful are the most important factors in determining whether women will report being very satisfied with the information they receive from their care providers.

The model reveals that women aged 35 and over are more likely to be very satisfied with the information provided to them by their care providers. This is interesting to note, because we know that women aged 35 and over are also the most likely to undergo a C-

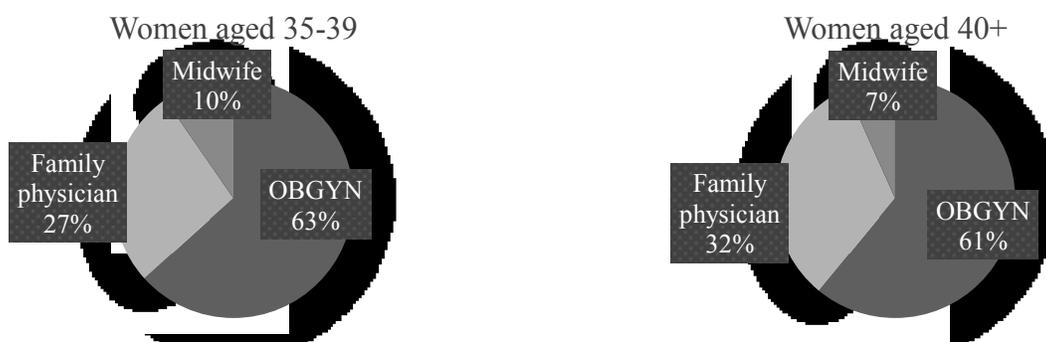
Table 3.9. Logistic Regression Results: Mother's Satisfaction with Information Provided by Care Providers, All Deliveries, Canada, MES, 2006-2007 (n=4,573)

Satisfaction with information (all deliveries)	Weighted Model		Unweighted Model	
	Odds Ratio	95% CI	Odds Ratio	95% CI
Age group				
15-24 (ref)	-----	-----	-----	-----
25-29	1.19	0.96—1.48	1.11	0.91—1.35
30-34	1.18	0.94—1.48	1.12	0.90—1.39
35+	1.33*	1.03—1.72	1.28*	1.00—1.64
Education				
No postsecondary (ref)	-----	-----	-----	-----
Any postsecondary	0.89	0.74—1.07	0.95	0.80—1.12
Region of birth				
Ontario (ref)	-----	-----	-----	-----
Atlantic Canada	1.25*	1.03—1.50	1.25*	1.03—1.53
Quebec	0.62*	0.51—0.74	0.61*	0.51—0.74
Manitoba/Saskatchewan/Territories	1.01	0.82—1.25	1.02	0.83—1.26
Alberta	1.26*	1.00—1.58	1.23	0.97—1.55
British Columbia	1.18	0.94—1.48	1.19	0.94—1.50
Census dissemination area				
Non-CMA (ref)	-----	-----	-----	-----
Small CMA	1.01	0.82—1.24	1.03	0.85—1.25
Large CMA	0.97	0.83—1.13	0.98	0.84—1.14
Household income				
<\$30,000 (ref)	-----	-----	-----	-----
\$30-49,000	1.22	0.98—1.52	1.19	0.97—1.46
\$50-79,000	1.10	0.89—1.37	1.15	0.94—1.40
\$80-99,000	0.99	0.76—1.29	1.04	0.82—1.32
\$100,000+	1.16	0.91—1.45	1.22	0.97—1.53
Perinatal care provider				
OBGYN (ref)	-----	-----	-----	-----
Other physician	1.01	0.88—1.17	1.01	0.89—1.16
Midwife	1.84*	1.09—3.13	2.17*	1.35—3.51
Other	1.28	0.65—2.51	0.95	0.59—1.54
Most useful source of information				
Physician (ref)	-----	-----	-----	-----
Family or friends	0.47*	0.37—0.59	0.43*	0.35—0.53
Midwife or doula	1.21	0.68—2.13	0.90	0.55—1.49
Nurse or Nurse Practitioner	0.59*	0.39—0.90	0.61*	0.42—0.88
Classes	0.53*	0.41—0.69	0.54*	0.43—0.69
Books	0.48*	0.40—0.56	0.46*	0.39—0.55
Internet	0.37*	0.29—0.47	0.35*	0.28—0.44
Type of delivery				
Vaginal birth (ref)	-----	-----	-----	-----
C-section	0.94	0.81—1.10	0.95	0.83—1.10
Parity				
Primiparous (ref)	-----	-----	-----	-----
Multiparous	0.98	0.85—1.13	0.00	0.87—1.15
Constant	2.32*	1.74—3.09	2.28*	1.74—2.99
Model fit statistics	F-adjusted mean residual test: F = 0.58 p = 0.82		Psuedo R ² = 0.05 Hosmer-Lemeshow χ^2 = 8.57 p = 0.38	

*p ≤ 0.05

section, but the regression findings suggest that they are likely happy with the information they received from the care provider leading up to, and following their C-section. Because women who are of advanced maternal age are such a key demographic because of their increased likelihood toward surgical birthing interventions, it is important to uncover the context surrounding this. The following charts show the distribution of primary prenatal care providers for women in this demographic. Note that women who had maternity care providers other than OBGYNs, family physicians, and midwives were excluded from the charts, since they comprised less than 1% of women.

Figure 3.3. Distribution of type of primary prenatal care provider, women aged 35-39 and 40+, MES, 2006-2007



It is interesting to consider the type of care provider when we discuss results that have to do with maternal age because know that the women in this demographic are the most likely to be very satisfied with the information they receive from their care providers; a logical next question however, is from which types of providers are they receiving this information? By and large, women in the 35+ demographic, like women across all age groups, are patients of OBGYNs, so it is plausible to conclude that a noteworthy proportion of the ‘very satisfactory’ information is coming from OBGYNs. That said, several professional associations whose members provide maternity care, including SOGC, the Canadian Association of Midwives (CAM) and the CFPC, released

a joint policy statement on normal childbirth in 2008 (SOGC 2008), so it is difficult to compare the information sources from care providers without conducting interviews with either women, or the care providers themselves.

The geographic region in which the birth occurred is also a significant indicator of the mother's satisfaction with the information from her care provider. Mothers in Atlantic Canada (Newfoundland and Labrador, Prince Edward Island, Nova Scotia, and New Brunswick) and Alberta were 25% more likely than women in Ontario to report being very satisfied. In this model, Quebec women were once again an anomaly, being the only region less likely (by 62%) to be very satisfied with the information provided to them by their care providers. Recall from the descriptive findings in Table 3.1 that Quebec has one of the lowest C-section rates in Canada, with only 22% of all births ending in surgical intervention, compared to the national average of 26%. These findings are interesting because as far as I know, there is no existing literature which compares geographic regions within Canada in this way. It would be interesting to do some qualitative follow-up with women in Quebec to determine what exactly about the information from their care providers was lacking, and how this is related to the provincial C-section rate, if at all.

Something that I think is particularly relevant to this research is the finding that women under the care of midwives were nearly twice as likely to be very satisfied with the information provided to them than women who were followed by OBGYNs. The MES data tables published by PHAC (2009b:8) reveal that a majority of women (58%) are followed by OBGYNs, yet women are more likely to be very satisfied with the information provided to them by midwives, which only followed 6% of pregnancies at

the time of the survey (PHAC 2009b:8). This is also a bit perplexing, considering the joint policy statement issued by maternity care providers in 2008, including the professional associations of both midwives and OBGYNs (SOGC 2008), which suggests that many of their respective positions on birthing interventions are consistent. Perhaps the finding that midwifery patients are more satisfied with the information they receive has to do with the way in which the information is presented, rather than how the information itself is different.

A recent study revealed that only 7% of Canadian physicians feel that they have adequate time with their patients, despite the fact that approximately 30% report working 40-49 hours per week in direct patient care alone (Tyssen et al. 2013). It is possible that the finding that midwifery patients were more satisfied with the information they received from their care providers than OBGYN patients speaks to this, in terms of the quantity of information women feel that they received, and the way in which they received it (in a rushed manner, compared to a more comprehensive discussion a woman might receive from a midwife).

That midwifery patients are more likely to be satisfied than OBGYN patients is also interesting when we consider other sources of information that women identified as useful. When we look at the results of this regression analysis in tandem with the descriptive data in Table 2.2, the results are particularly telling. The results reveal that compared to women who received their most useful information from their medical doctors, those who preferred the information received from family and friends (approximately 10% of women) were less than half as likely to report being very satisfied with the information they received from a medical doctor. Similarly, women who found

that nurses or nurse practitioners were their most useful source of information (about 2% of women) were about two thirds as likely to be very satisfied with the information received from a physician. Finally, compared to women who received the most useful information from a medical doctor, women whose preferred information sources were prenatal classes (7%) and books (23%) were about half as likely to be satisfied with the information provided by a medical doctor. Women who referred to the Internet (8%) were 37% less likely to be very satisfied with that information.

These findings suggest that women who are dissatisfied with the information they receive from a physician are going out and seeking information that is more useful to them from alternative sources. Chapter 5 describes the qualitative analysis of a selection of women's preferred information sources. This portion of the analysis seeks to explore the differences between sources of information to better understand the extent to which women must navigate a plethora of information, some of which is conflicting. The ultimate goal of this is to theorize the implications of the types of information available, and how this information is presented, on decision making.

'Likelihood of Being 'Very Satisfied' (Caesarean Deliveries)

Table 3.10 contains the results from a second logistic regression model exploring women's satisfaction with the information they receive from their primary maternal care providers, but this iteration includes only women who delivered via C-section. My intention is to be able to isolate the experiences of women who underwent a caesarean delivery in order to determine whether they are more or less satisfied with the information they received from their care providers, compared to the entire sample of

Table 3.10. Logistic Regression Results: Mother's Satisfaction with Information Provided by Care Providers, Caesarean Deliveries, Canada, MES, 2006-2007 (n=1,255)

Satisfaction with information (C-sections)	Weighted Model		Unweighted Model	
	Odds Ratio	95% CI	Odds Ratio	95% CI
Age group				
15-24 (ref)	-----	-----	-----	-----
25-29	1.41	0.88—2.24	1.30	0.85—2.00
30-34	1.17	0.73—1.87	1.01	0.65—1.57
35+	1.39	0.82—2.35	1.26	0.78—2.06
Education				
No postsecondary (ref)	-----	-----	-----	-----
Any postsecondary	1.00	0.71—1.41	1.18	0.84—1.65
Region of birth				
Ontario (ref)	-----	-----	-----	-----
Atlantic Canada	1.12	0.77—1.62	1.10	0.76—1.60
Quebec	0.49*	0.33—0.73	0.47*	0.32—0.68
Manitoba/Saskatchewan/Territories	0.94	0.62—1.42	1.04	0.69—1.56
Alberta	1.19	0.75—1.90	1.16	0.74—1.82
British Columbia	0.89	0.59—1.34	0.89	0.58—1.36
Census dissemination area				
Non-CMA (ref)	-----	-----	-----	-----
Small CMA	0.76	0.50—1.16	0.73	0.50—1.06
Large CMA	0.88	0.66—1.18	0.84	0.62—1.13
Household income				
<\$30,000 (ref)	-----	-----	-----	-----
\$30-49,000	1.05	0.68—1.64	1.19	0.79—1.81
\$50-79,000	1.12	0.72—1.73	1.20	0.80—1.79
\$80-99,000	0.95	0.57—1.60	0.96	0.60—1.54
\$100,000+	1.03	0.63—1.67	1.13	0.72—1.76
Perinatal care provider				
OBGYN (ref)	-----	-----	-----	-----
Other physician	1.03	0.77—1.38	1.04	0.80—1.37
Midwife	1.08	0.35—3.30	1.23	0.49—3.12
Other	1.22	0.14—10.98	2.26	0.58—8.85
Most useful source of information				
Physician (ref)	-----	-----	-----	-----
Family or friends	0.47*	0.29—0.78	0.41*	0.27—0.63
Midwife or doula	2.40	0.65—8.81	1.72	0.58—5.12
Nurse or Nurse Practitioner	0.70	0.24—2.06	0.75	0.33—1.69
Classes	0.44*	0.27—0.75	0.51*	0.32—0.81
Books	0.47*	0.33—0.65	0.46*	0.34—0.63
Internet	0.53*	0.35—0.82	0.53*	0.34—0.80
Type of C-section				
Planned (ref)	-----	-----	-----	-----
Unplanned	0.64*	0.46—0.88	0.64	0.48—0.87
Parity				
Primiparous (ref)	-----	-----	-----	-----
Multiparous	0.77	0.54—1.08	0.84	0.61—1.15
Constant	3.25*	1.75—6.05	2.94*	1.66—5.20
Model fit statistics	F-adjusted mean residual test: F = 0.77 p = 0.64		Pseudo R ² = 0.06 Hosmer-Lemeshow χ^2 = 7.04 Prob > χ^2 = 0.53	

*p ≤ 0.05

women. I was disappointed to discover that some of the results that were significant in the first model were no longer significant when I made this distinction, although I suspect that this could be partly attributable to the decreased sample size of this model, since I reduced the population of included women from 4,573 to 1,255. In this version of the model, geographical region, information source, and whether C-sections were planned or unplanned were the most important indicators of maternal satisfaction with the information provided by care providers.

Quebec women who delivered via C-section were twice as likely as their Ontario counterparts to be very satisfied with the information they received from their prenatal care providers, which differs from the sample of all Quebec women, who were less likely to be satisfied with this information. I have explored the existing literature in this area to try to hypothesize why Quebec women stand out so much in the regression models, but unfortunately very little social research has been done to help me theorize their difference compared to other geographical areas in Canada. A potential consideration is the way that the regions are collapsed in the modelling. Perhaps if the sample size would have allowed for each region to be assessed independently, we would have observed significant differences between more of the provinces and territories.

Among women who delivered via C-section, those who sought information from sources other than a medical doctor were less likely to be satisfied with the information they did receive from their care providers. For example, compared to women who received information from their doctors, women who cited family and friends as their preferred source of information (about 23% of women) were half as likely to be very satisfied with the information they received from their care providers. Similarly, women

who cited classes, books, or the internet as their preferred source of information were all about half as likely to be very satisfied with the information they receive from a physician.

These findings were very interesting to me, because although women who have C-sections are almost exclusively cared for by medical doctors, they vary quite a bit in terms of the sources of information that they find most useful. While this in itself is not surprising, since this can be explained by something as simple as personal preference, I was surprised to see that women who prefer the information from family and friends, classes, books, and the Internet were particularly less likely to find information from physicians useful. This once again implies that women who are perhaps not entirely satisfied with the information they get from their doctor take the initiative to seek information elsewhere. It would be interesting to follow-up qualitatively with this line of questioning, particularly to determine what women found lacking from the information they received from physicians, and how alternative sources of information, such as books, classes, the Internet, and the experiences of others were able to fill this gap.

Finally, the type of C-section women had was a relevant determinant of their satisfaction level with the information they received from their care providers. Women who had an unplanned caesarean delivery were about one third as likely to be very satisfied with the information they received from their care providers, compared to women who had a planned C-section. This may be partly due to the fact that unplanned C-sections typically occur in emergency situations, and perhaps women feel that they did not have enough information to be prepared for that experience. However, this also raises questions about a woman's ability to make an informed decision about something as

serious as a caesarean delivery if she is in somewhat dissatisfied with the information she was given by her doctor.

Summary: How Satisfied Are Women with the Information They Receive from their Primary Care Providers?

The purpose of this section has been to highlight the quantitative findings that answer the following research question: How satisfied are women with the information they were given by their primary maternal care providers? The following list provides a concise recap of the key findings of this portion of my analysis:

- Women who were aged 35 and over were the most likely to be satisfied with the information they received from their care providers
- When we look at all births, women in Atlantic Canada and Alberta were more likely to be satisfied with the information from their care providers
- Women in Quebec were consistently less likely to be satisfied with the information they received from their care providers, compared to women in Ontario
- Women who saw midwives were more likely to be satisfied with the information they were provided than women who saw OBGYNs
- Women who had unplanned C-sections were 64% less likely to be satisfied with their care provider's information
- Women who sought information from any source other than their care provider were less likely to be satisfied with the information provided by the care providers themselves

Conclusion

This chapter has revealed the results of my statistical analysis. The purpose of the quantitative analysis has been threefold: (1) to assess the tendency towards C-section among certain sociodemographic groups; (2) to determine how satisfied women are with their role in decision making with their care providers, and (3) to identify the most valuable sources of information that women refer to for perinatal-related information. I will be using these findings to inform the qualitative portion of my study in order to gain a more holistic view of the competing sources of information that women must navigate throughout their maternal care experiences, paying particular attention to the risk discourses embedded in these. In turn, I hope to unpack the ways in which these risk discourses impact decision making during pregnancy.

Chapter 4: Qualitative Findings

The purpose of this chapter is to follow the quantitative findings of my research with a more in-depth discussion of the sources of information that women consult during pregnancy. Particular emphasis is placed on the risk discourses embedded in these sources, in response to my research questions of what sorts of risk discourses are embedded in various sources of information, and how the risks associated with C-section are presented in these outlets. Using Mary Douglas' concept of risks as forensic resources (1990) as described in Chapter 2, I assess the ways in which prominent sources of pregnancy information use risks to warn of impending danger. I expect that this analysis will lead to a better understanding of the impact of heightened perceptions of risk on decision making surrounding surgical birthing interventions.

Medical doctors (MDs) are largely considered to be the authoritative experts in maternity-related matters, with obstetricians/gynaecologists (OBGYNs) and family physicians caring for 58% and 34% of patients, respectively (PHAC 2009b:8). According to the quantitative findings of this research, approximately 27% of new mothers also report that MDs were their most useful source of information during pregnancy. As such, I expect that the majority of the information sources I explore will be disproportionately skewed, with views predominantly from a medical perspective, which I expect to present pregnancy-related risks as forensic resources. The findings from this component of my thesis will once again inform my larger discussion surrounding the impact of risk discourses on decision making. I posit that risk rationalities which are embedded in seemingly-neutral information sources serve to reduce the element of choice from

decision making, by superimposing discourses that sway women using notions of safety, wellbeing, and sensibility.

In this chapter, I assess various information sources, making use of the under-appreciated but highly effective qualitative description method. The sources I analyze here include information from prenatal care providers, books, and the Internet. Because no interviews with care providers were conducted, I assess the official positions on C-section of their professional associations. Assessing the policies of professional bodies speaks to the body of literature on the complexities of guideline adherence that suggests that physicians' opinions do not necessarily align with the positions and policies of their professional associations (for examples, see Lugtenberg et al. 2014, Sewitch et al. 2007, and Haggard 2011).

Information from Physicians

As noted above, physicians are the most common prenatal care providers in Canada. Medical authority in matters of maternal health is not only highly esteemed, but it is nearly ubiquitous, which is evident when we consider that at the time of the MES, over 90% of pregnancies were attended by obstetricians, gynaecologists, and family physicians (PHAC 2009b:8). In light of this, my regression analysis revealed some surprising results, including the finding that women whose preferred source of information came from family or friends, classes, books, and the Internet were much less likely to be satisfied with their involvement in decision making than women who got their information from a physician. The regression results also revealed that women who sought information from any source other than their care provider were less likely to be satisfied with the information provided by the care providers themselves. This means that

in over 90% of cases, women who seek information from sources aside from a physician are more likely to be satisfied with that information, implying that something is lacking from the information translated from physicians, be it in the information itself, or in the delivery method.

Society of Obstetricians and Gynaecologists of Canada

SOGC is the professional organization for practitioners of obstetrics and gynaecology. SOGC consists of physicians, nurses, midwives, and allied health professionals working in the field of reproductive health (SOGC *N.d.b*). According to their website, the organization is a leading authority on reproductive health care, and part of its mission statement is the belief that “women should have the knowledge they need to make informed choices about their health” (SOGC *N.d.b*).

Something I found quite useful about SOGC’s website is that the information is presented with expectant mothers as the intended audience. For example, the site’s page on C-section has the following tagline: “You’re going to have a baby...learn what you need to know about C-section” (SOGC *N.d.c*). The page lays out the information in the following way:

- What is a C-section?
- Why is a C-section done?
 - Reasons related to the baby
 - Reasons related to the mother
- Is C-section safe?
- Complications that may affect babies
- Complications that may affect the mother

- What will happen during a C-section?
 - Preparations
 - Surgery
 - After delivery
- Can I still have a traditional delivery?

At three distinct places on the page, SOGC mentions alternatives to C-section. The first instance was right at the beginning, under the ‘What is a C-section?’ heading. Before even defining the concept of C-section, the paragraph opens with “[t]he traditional way to give birth is through the vaginal passage, the natural way” (SOGC *N.d.c*). It goes on to list the benefits of vaginal birth, before finally presenting a very concise conceptualization: “However, you may need a caesarean, also called a C-section. Caesarean is when your baby is delivered through a surgical opening in the lower belly area instead of the vagina” (SOGC *N.d.c*).

Further down, when breech positioning is discussed as a potential indication of C-section, SOGC notes that despite this, there are mixed views on whether surgical deliveries are always necessary in this situation, and the site recommends that women discuss the particulars of their pregnancies with a health provider. SOGC presents information on breech birth on a separate web page, and unfortunately the two are not linked, so a woman seeking information would have to search specifically for “breech birth”. The page on breech birth explains the situation in much more detail, and ends with a statement urging women to discuss their particulars with their health-care provider (SOGC *N.d.d*).

The third instance where alternatives to surgical intervention are mentioned in SOCG's main page on C-section occurs in the final section: "Can I still have a traditional delivery?" This section specifically addresses VBAC, and SOGC positions itself as favourable to this option: "Many women who have previously given birth through caesarean section can still safely give birth to a child through a traditional vaginal delivery. Attempts at vaginal birth after having a past caesarean have a high success rate and many benefits" (SOGC *N.d.c*).

I think it is important to recognize that SOGC encourages alternatives to C-section in several instances, because contrary to some of the power-driven ideologies about physician-patient relationships and the unnecessary medicalizing of maternity care, SOGC publicly positions itself in a way that suggests that natural birth is the most desirable outcome. It would be interesting to determine whether the practice is consistent with the official position—something that could be determined through the use of interviews with physicians and women who have been under the care of an OBGYN during pregnancy.

The College of Family Physicians of Canada

Family physicians were the primary care providers in approximately 34% of pregnancies at the time of the MES (PHAC 2009b:8). The CFPC represents more than 35,000 physicians across the country, and "is the professional organization responsible for establishing standards for the training, certification and lifelong education of family physicians and for advocating on behalf of the specialty of family medicine, family physicians and their patients" (CFPC *N.d.a*).

The information on CFPC's website was geared towards physicians, not patients. For example, the page titled "Maternity and Newborn Care" had no narrative information at all, but rather contained a series of external links to other associations and organizations (including a link to SOGC's generic page for clinical practice guidelines), along with a list of six downloadable reports and documents, two of which are related to education for medical trainees. Within this list was also a link to a joint policy statement on normal childbirth issued by several maternity care stakeholders, which contained a lot of information about the professions' mutual positions on C-section.

Joint Policy Statement on Normal Childbirth

The statement was released in December 2008 in the Journal of Obstetrics and Gynaecology Canada. It was reviewed and approved by several maternity care stakeholders: SOGC, the Association of Women's Health, Obstetric and Neonatal Nurses of Canada, the Canadian Association of Midwives (CAM), the CFPC, and the Society of Rural Physicians of Canada (SRPC).

Within the statement, normal childbirth is defined as:

Spontaneous in onset, is low-risk at the start of labour and remains so throughout labour and birth. The infant is born spontaneously in vertex position between 37 and 42+0 completed weeks of pregnancy. Normal birth includes the opportunity for skin-skin holding and breastfeeding in the first hour after the birth (SOGC 2008: 1163).

The statement also identifies several beliefs of the maternity health care providers that directly address the topic of my research: that vaginal birth following a normal pregnancy is safer for mother and child, that C-section should be reserved for pregnancies in which there is a threat to the health of the mother and/or baby, and that a C-section should not

be offered to a pregnant woman when there is no obstetrical indication (SOGC 2008:1164).

What remains a perplexing question is why the C-section rate is so high when they are discouraged in low-risk situations. This is an area of the literature that would benefit from further research; perhaps care providers' practice is not aligned with the recommendations of their professional associations, a conclusion that could likely be drawn if follow-up interviews were conducted with both physicians and women who were under their care. A recent Canadian study found that the habits and attitudes of doctors and hospital administrators have played a role in the increasing trend towards C-section. The study, which consisted of a survey of approximately 850 obstetricians (82% of whom were women) found that 20% felt that C-section was safer than vaginal birth for mothers and babies (Klein 2011). This suggests that 1 in 5 obstetricians position themselves differently than the official policies of their professional associations.

Because it seems unlikely that one third of pregnancies in Canada are considered high-risk, I am also highly suspicious of the role of seemingly harmless interventions on subsequent surgical deliveries, which is a surprisingly under-researched area within a Canadian context. The association between C-section and various routine interventions has been studied extensively in the United States, however. In her seminal book *Birth as an American Right of Passage*, Robbie Davis-Floyd likens birth interventions to the technocratization of birth (2003:131). In her chapter on birth messages, she describes standard procedures for normal birth, noting that in spite of small concessions for more natural birth, such as birthing suites and the ability for labouring women to wear their own clothing, "a basic pattern of high-technological intervention remains: most hospitals

now *require* at least periodic electronic monitoring of all laboring women; analgesics, Pitocin, epidurals, and episiotomies are widely applied; and one in five is delivered by Caesarean section)” (2003:75).

Summary: Information from Prenatal Care Providers

From the perspective of an expectant mother independently seeking trustworthy information, I found the information available via professional associations to be of mixed value. As described above, depending on the association, the information was not necessarily presented with a patient audience in mind. For example, the information from CFPC and SRPC was exclusively geared towards health care professionals, and in fact, it contained little procedural or guideline-driven information that would be of value to expectant mothers. However, the information provided on the SOGC website was detailed, unbiased, and geared towards new mothers.

I was expecting to come across information that was presented in a way that would incite fear in expectant mothers, by being laden with details about potential risks and complications that would somehow rationalize or justify the alarming C-section rate in Canada, but the information I found on the SOGC site was clear, concise, and informative without being fear-provoking. There were definitely risks presented on the site, however—both the labour and delivery risks that would necessitate a C-section along with the risks associated with the procedure itself. These are risks as forensic resources (Douglas 1990), whether they are intended to encourage or discourage a certain outcome. I explore the implications of this further in Chapter 6.

While there is valuable information available through SOGC, it still begs the question of how the official positions of professional associations differ from the

information given in direct physician-patient encounters. I understood that analysing this form of data was in no way a proxy for interviews with women or care providers about the information that is exchanged in these encounters, but it would be interesting to see the extent to which care providers align themselves with these official positions when advising patients.

My quantitative analysis revealed that women whose sought information independently were much less likely to be satisfied with their involvement in decision making, and with information they received from their care providers, than women who got their information from a physician. This implies that perhaps something is lacking from the information translated to patients, be it in the information itself, or in the delivery method. It could also speak to the different sets of expectations that women may have if they are active in their information seeking, compared to those who rely exclusively on their OBGYN. More research is needed in this area to get a complete understanding of *what* exactly is the nature of women's dissatisfaction with their involvement in decision making with their care providers.

The intricate relationship between women and their care providers is likely best understood through a risk theory lens that emphasizes power relations. As discussed in Chapter 2, Foucault identified governmentality as the role played by experts in constructing and mediating discourses surrounding risks. Lupton (1999) describes the vast networks of expert knowledges, accompanied by apparatuses and institutions built around the construction, reproduction, and dissemination of these knowledges, which is directly relevant to this discussion. While perhaps not overt or explicit in the information sources I analyzed from physicians here, Foucault implied an underlying drive for

power and authority is a central tenet of governmentality. As such, I think that risk as a strategy for disciplinary power is a definite consequence of the expert knowledges that care providers, particularly in a medicalized context, exert on expectant mothers, because these views are ultimately absorbed and used to make decision.

Presentation of Risks

SOCG's position in favour of natural birth is obvious from their website. While they do use risks as forensic resources to justify instances where C-section is medically justified, they also provide a considerable list of potential complications, which are effectively forensic resources as well, but these serve to translate the severity of the procedure to patients, which may discourage women contemplating elective C-sections. Using risks to highlight the dangers of C-section may also encourage women to pose questions and seek clarification about their own situation if faced with a medically necessitated C-section.

The joint policy statement on natural childbirth released by SOGC also emphasizes minimal intervention and natural birth, but risks are not discussed in this document. This is likely because the focus of the document is not on C-section specifically, so the emphasis is on the advantages of minimal intervention birth.

Information from Books

According to findings from the MES, approximately 23% of women found books to be their most useful source of information during pregnancy. Since the survey does not include any qualitative responses to determine exactly which books women found informative, I will be looking at four popular pregnancy books, focusing specifically on the chapters that deal with C-sections. The books were chosen based on Amazon's list of

bestsellers. Perhaps the best-known pregnancy book, *What to Expect when you're Expecting*, holds the top two spots, the first for the print copy (now in its 4th edition), and the second for the e-book version.

#1 and #2: What to Expect when you're Expecting

As noted above, this book is very well-known, with over 37,000 ratings on goodreads.com, and an estimated over 18 million copies sold by the time of the 4th edition release in April 2008 (Murkoff and Mazel 2008). The first part of the book is structured by gestational month, and is laid out in a Q and A format. In the chapter for the eighth month, the topic of Caesarean delivery is first addressed. The two issues that structure the section are “I was hoping for a vaginal birth, but my doctor just told me I’ll probably have to have a caesarean. I’m really disappointed” and “Why does it seem everyone I know (my sister, my friends, plus just about every celebrity) is having C-sections these days?” Consistent themes in the section are safety, and consulting with one’s doctor before making any decisions. Both of these questions raise interesting points relevant to my research topic.

Disappointment over a C-section

The first issue addressed by the book is “I was hoping for a vaginal birth, but my doctor just told me I’ll probably have to have a caesarean. I’m really disappointed” (Murkoff and Mazel 2008:320-1). With the authors’ actual response to this aside, the narrative of the statement struck me as a bit troubling, because it is presented in a way that implies that the mother was uninvolved in the decision making surrounding the impending C-section. It would be interesting to know *why* the doctor is recommending such a drastic measure, and this is actually very relevant, because in some situations that

medically indicated scheduling of a C-section in the past (for example, breech births and for VBACs), research now suggests that vaginal birth is a perfectly viable option (SOGC *N.d.b*).

The language used in the response is also troubling. A few examples of language I found particularly problematic are:

- “A caesarean is a very safe way to deliver” (320)
- “Thirty-four percent of women are having C-sections these days, which means the chances that your baby will end up arriving via the surgical route are more than 1 in 3” (320)
- “...if your practitioner ultimately decides that your baby’s best exit strategy is through your abdomen...” (320)
- “A surgical birth experience may be more satisfying than you’re imagining” (321)
- “...you’ll also be delivering with your perineum intact and your vaginal muscles unstretched” (321)
- “The plus side for baby in a caesarean delivery is purely cosmetic—and temporary; because there’s no tight squeeze through the birth canal, he or she will have an initial edge in appearance over vaginally delivered babies (think round head, not pointy)” (321)

Much of the narrative presented by Murkoff and Mazel normalizes C-section, in many instances making it seem like a routine part of having a baby. While this sort of discourse is very good at lessening fears surrounding surgical births, it is not productive in terms of addressing the reasons behind the alarming rate of C-section in Canada and elsewhere. To the contrary, narratives such as these demystify C-section to the point of making it seem

desirable, with promises of intact sexual organs and a more attractive child, which in fact may deter women from pushing for natural birthing experiences. Logically, something that is routine and common is much less likely to be contested than something that is threatening, risky, and potentially dangerous.

Interestingly, the text has the potential to encourage women to advocate for themselves to determine whether the unwanted surgical route is truly the only option available given the circumstances, but the authors fail to do so. In saying things like “if your practitioner ultimately decides” (320), they imply that doctors are the authoritative figures in the patient-physician encounters. This supports a patriarchal model of decision making in healthcare encounters, which is a bit perplexing given the context of the book: an information source for *women*.

It is noteworthy that a book with such ubiquitous influence in matters of maternal health (the book has become a lucrative franchise with a popular website and mobile app) is passing on a well-situated opportunity to empower women in matters relating to their care. Rather, much of the book has a passive tone that both directly and indirectly advises women to let their care providers make decisions for them based on what is best for their particular situations. The discursive effects of this sort of narrative have important implications in terms of power and authority dynamics between women and their care providers, a key theme in the governmentality literature. It is surprising that such an ideally-situated and influential source of information has passed on the opportunity to encourage women to be active participants in the decision making surrounding their pregnancies, labours, deliveries, and ultimately in their health and the health of their children.

The Increasingly Common C-section

The next issue addressed by the book is “Why does it seem everyone I know (my sister, my friends, plus just about every celebrity) is having C-sections these days?” (Murkoff and Mazel 2008:321-2). This section lists some of the potential causes of high C-section rates, including the safety of the procedure, the increasing sizes of babies and mothers, increased maternal age, multiple C-sections (i.e., the contraindication of VBAC), fewer instrumental deliveries, elective C-section requests, and most surprisingly, satisfaction.

Table 4.1. Factors contributing to rising C-section rates, according to the book *What to Expect when you're Expecting* (Murkoff and Mazel 2008: 321-2)

Reason	Explanation given
Safety	<ul style="list-style-type: none"> • Surgical delivery is extremely safe thanks to today's better technology • Modern technology can more accurately indicate when the fetus in is trouble
Bigger babies	<ul style="list-style-type: none"> • Increasingly, mothers exceed the recommended weight gain which results in larger babies • Increased rates of gestational diabetes results in larger babies • Larger babies are more difficult to deliver vaginally
Bigger moms	<ul style="list-style-type: none"> • Obesity rate has risen among expectant mothers, significantly increasing a woman's chance of having a C-section
Older mothers	<ul style="list-style-type: none"> • More and more women in their late 30s and early 40s are having successful pregnancies, but they are more likely to require C-sections
Repeat C-sections	<ul style="list-style-type: none"> • VBAC is only considered a viable option in <i>a few</i> cases, with fewer doctors and hospitals allowing women to try one
Fewer instrumental deliveries	<ul style="list-style-type: none"> • Fewer babies are being born with the help of vacuum extraction and even fewer with forceps, which means that doctors are turning to surgical deliveries (when in the past they have turned to instruments)
Requests by moms	<ul style="list-style-type: none"> • Since caesareans are so safe and can prevent the pain of labour while keeping the perineum intact, some women prefer them to vaginal deliveries
Satisfaction	<ul style="list-style-type: none"> • Family-friendly policies have made for a very satisfying surgical birth experience • A C-section is very quick (lasting approximately 10 minutes for the delivery itself, plus another 30 minutes for suturing)

Once again, C-sections are presented very casually, and the authors discuss the procedure as though it is not only routine, but a perfectly legitimate option to consider. While alarming national C-section rates across the developed world do indeed imply that surgical births have become routine, it is noteworthy that they are discussed here without simultaneously mentioning the extensive list of associated morbidities. While the casual language of the narrative may be intentional on the part of Murkoff and Mazel in order to prevent fear of the procedure in the event that one should become inevitable, I would argue that C-section *is* something to be cautious of, and it would be much more prudent to present it in such a way.

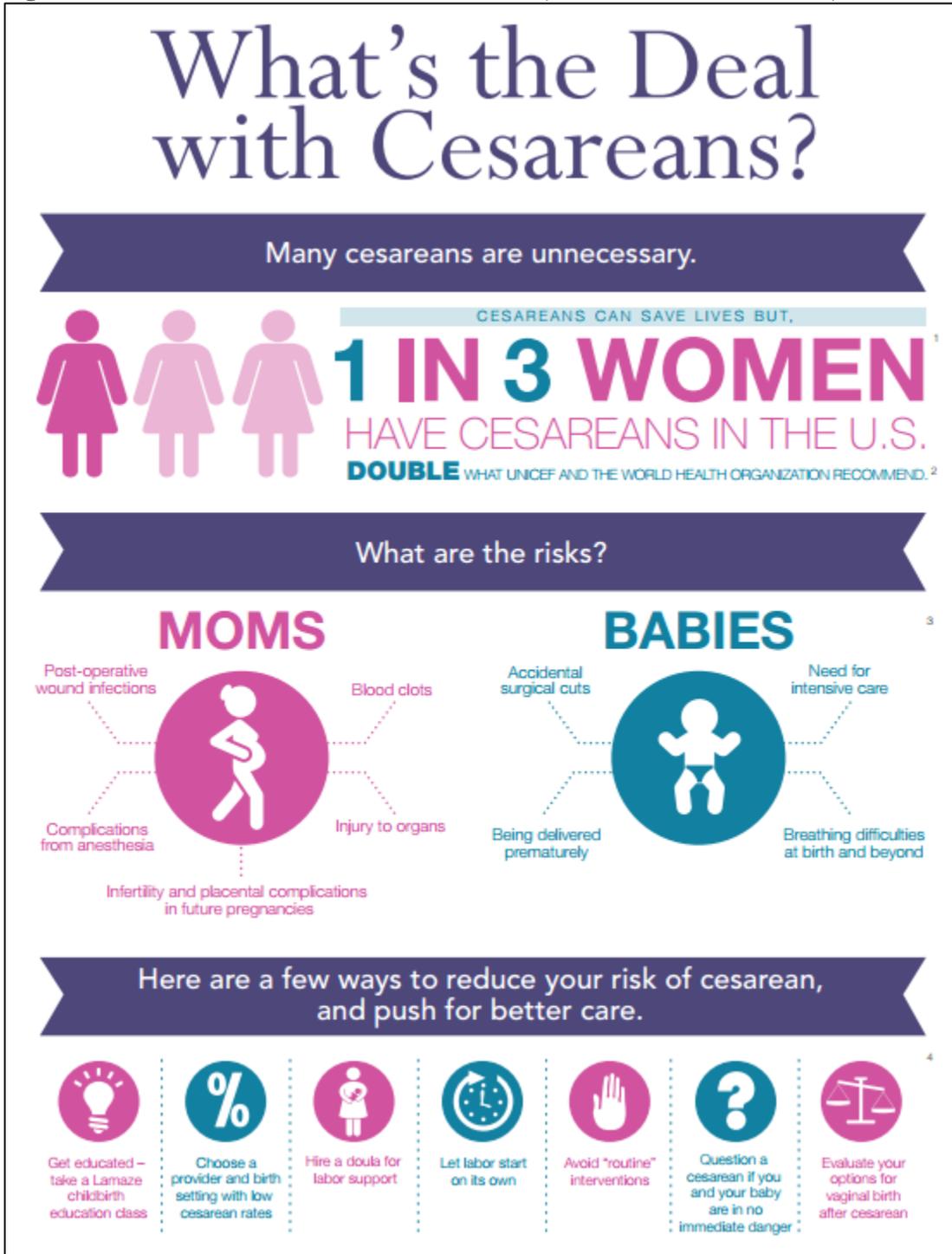
Later in the book, on the chapter on labour and delivery, there is another page and a half of information about C-section, this focusing on the actual procedure. The authors open the section with the following:

You won't be able to participate actively at a caesarean delivery the way you would at a vaginal one, and some would consider that a definite plus. Instead of huffing, puffing, and pushing your baby into the world, you'll get to lie back and let everybody else do all the heavy lifting. In fact, your most important contribution to your baby's caesarean birth will be preparation: The more you know, the more comfortable you'll feel. (Murkoff and Mazel 2008: 398).

It seems that in this section, the authors once again try to diminish the severity of surgical birthing interventions by making them seem like a desirable and equal alternative to vaginal birth. I find this particularly ironic, since evidence shows that the morbidity association with C-section is much higher than for vaginal birth. Compared to vaginal delivery, C-sections pose greater risk of cardiac arrest, hysterectomy, infection, fever, pneumonia, blood-vessel clotting, and haemorrhaging, not to mention the risks to the baby (Liu et al. 2007; Miesnik and Reale 2007; Negele et al. 2004). There are also considerable psychosocial and behavioural consequences to surgical birthing

interventions (Lobel and DeLuca 2007; Somera, Feeley, and Ciofani 2010). Figure 4.1 is an infographic published by Lamaze International, illustrating the health risks associated with C-section (Lamaze International 2012).

Figure 4.1. Health risks associated with C-section (Lamaze International, 2012)



The WHO also reports that overall, the incidence rate for severe maternal outcomes associated with elective C-section is about three times greater than those associated with vaginal birth, and when elective C-sections are performed before the onset of labour, the risk of short-term adverse outcomes is nearly sixfold (14 times above the level of risk when performed after the onset of labour). In fact, all modes of delivery other than spontaneous vaginal birth showed a trend towards increased short-term adverse outcomes, which raises concerns about the use of C-section in the absence of medical need (Souza 2010).

The one aspect of *What to Expect when you're Expecting* that I agree with is that an informed mother is key. However, it is troubling that the authors only suggest that women inform themselves as a way of assuaging any fear they may have, rather than encouraging them to be armed with knowledge so that they are in a position to make informed decisions about their situation. When describing C-section, the authors note that “things may move very quickly. Try to stay calm and focused in the face of all that activity, and don't let it worry you—that's just the way things work in a hospital sometimes” (Murkoff and Mazel 2008:399). Here, women are encouraged to be passive participants in the process of C-section, suggesting that there is a routinized procedure to be followed, which may discourage women from asking questions and seeking clarification about their situation.

#3: Mayo Clinic Guide to a Healthy Pregnancy

This book was structured quite differently from *What to Expect when you're Expecting*, which was laid out in a Q&A style. The book was written by pregnancy experts at the Mayo Clinic, and the cover touts that the authors are doctors who are

parents too. Originally published in 2004, the book has a rating of 4.1/5 on goodreads.com, and claims to provide expectant mothers with practical information and reassurance on pregnancy and childbirth. There are two chapters dedicated to C-section in the tome, the first of which addresses caesarean birth broadly, and the second of which addresses women considering an elective C-section.

Information about C-sections

The chapter dealing with C-section was much more detailed than a similar chapter in *What to Expect when you're Expecting*. Right away, the authors note that “[i]n many cases, the need for a C-section doesn’t become obvious until labour has already started. Knowing what to expect can help you prepare if a C-section is necessary” (Harms and Wick 2011:221). This sets the tone right away that mothers should arm themselves with information in order to be prepared for a variety of potential scenarios during their labour and delivery.

Like in *What to Expect when you're Expecting*, the Mayo Clinic’s book provides a list of potential reasons for why C-sections might be performed. In this book, the list is very detailed, and is much more health- and risk-centric, with an explicit note that “[s]ometimes the procedure is done when both mom and baby are healthy. This is called an elective C-section, and it’s controversial” (Harms and Wick 2011:221). Further on, the book says that “[t]hese C-sections aren’t performed for health reasons. Instead, they’re done out of fear or wanting to avoid an inconvenience. And they’re not good reasons to have a C-section” (Harms and Wick 2011:225). This statement is interesting, because unlike *What to Expect when you're Expecting*, which presents non-medical mother-centric reasons for elective C-section as legitimate, the Mayo Clinic bluntly paints this

sort of surgery as something that is almost shameful. There are previous scholarly debates surrounding this in the feminist literature on maternal health. For example, Bergeron (2007) considers the ethical implications of elective C-section, while proponents of caesarean section on maternal demand advocate for a woman's right to choose her mode of delivery, regardless of her reasons (Minkoff and Chervenak 2003; Hannah 2004).

When discussing the medical reasons for planned C-section, the book states that it can be difficult for physicians to determine when a risk is genuine (Harms and Wick 2011:222), which was refreshing, because it acknowledges that medical risks may sometimes be ambiguous. This statement is unique in the books I analyzed, but it is a critical piece of information for women. If it is so difficult to determine whether a risk is real, then the whole concept of medically-necessary C-sections becomes a bit contentious. If every woman faced with a C-section were to take a moment to confirm that C-section was her *only* viable option for a safe delivery, perhaps we would see fewer C-sections performed. I address this in more depth in a later section which describes the narratives in a book by a popular midwife.

Finally, this chapter contained a very detailed list of the risks associated with surgical delivery. The authors state that:

Caesarean birth is a major surgery. Although considered a very safe procedure, it carries certain risks, as do all surgeries. An important point to remember is that C-sections are often performed to resolve life-threatening complications. Therefore, it's to be expected that more complications would arise in women who have them. (Harms and Wick 2011:224).

This quote is an example of a sensible statement about C-section, because it relays the severity of C-section while simultaneously assuaging potential fear by mentioning that it is considered to be a very safe procedure.

Elective C-sections

Mentioned briefly in the chapter on C-section, the *Mayo Clinic Guide to a Healthy Pregnancy* also dedicates an entire chapter on elective caesarean birth. As discussed above, the narrative of the chapter is discouraging of elective C-section, with statements such as “[i]f fear is your major motivation, a frank discussion of what to expect might help along with childbirth education classes” (Harms and Wick 2011:355).

Interestingly, this book positions a woman’s desire to have an elective C-section as something that is influenced by fear of the unknown—something to be ‘helped’. Some of the fears they blame include fear of labour, delivery, and pain, fear of damage to the pelvic floor, and fear of sexual problems after the birth. These reasons, which are consistent with some of those cited in *What to Expect when you’re Expecting*, also differ from them, because the authors do not acknowledge these as legitimate reasons for a C-section, unlike Murkoff and Mazel, who treat elective C-section much more casually.

The chapter also re-iterates the risks associated with C-section, which implies that there really is only one sensible option: to avoid the potential short-term and long-term risks associated with elective C-section, since unlike with medically-necessary surgical births, the benefits do not outweigh these risks.

Of particular interest is that the authors state that:

If your care provider doesn’t at least challenge your request for an elective caesarean delivery you should ask yourself why. Physicians are duty bound to avoid unnecessary medical interventions, especially those interventions that carry risk. The lack of scientific evidence to support elective caesarean delivery makes such a procedure unnecessary. (Harms and Wick 2011:359)

This passage reiterates that elective C-sections are not to be considered as a routine alternative to vaginal birth, unless where medically indicated. More importantly, it plays

on the requirements of physicians to simultaneously respect patient autonomy while honouring their responsibility to minimize harm and potential risks to mother and baby.

#4: Ina May's Guide to Childbirth

Ina May's Guide to Childbirth is written by North America's most well-known midwife, Ina May Gaskin. The Farm Midwifery Centre (The Farm) in Tennessee, which was founded and is directed by Gaskin, has handled over 3000 births, with remarkably positive outcomes for minimally invasive labours and deliveries. Something unique to this book is that the entire first part is dedicated to stories of positive birth experience from real mothers who have delivered at The Farm. The reason for this, Gaskin explains in the book's introduction, is to demystify labour and delivery in order to alleviate the fears surrounding the experience. She writes:

There is extraordinary psychological benefit in belonging to a group of women who have positive stories to tell about their birth experiences. This phenomenon is exactly what developed within our village. So many horror stories circulate about birth—especially in the United States—that it can be difficult for women to believe that labour and birth can be a beneficial experience. (Gaskin 2003:3).

The birth stories included in the book serve to make the reader feel as though she does belong to a group of women, because the stories are relatable, despite the fears and uncertainty that tend to be associated with non-technocratic cases of labour and delivery (Davis-Floyd 2003:51).

Gaskin's book is also unique in terms of its narrative. While factual and evidence-based, the advice provided in the book reads more like a conversation *with* the reader, as opposed to the other books, which had narratives directed *at* the reader. Furthermore, what was surprising, was that Gaskin's prose was not condescending, and in no way

implied that births outside of hospitals (which she is a proponent of) were superior to other forms of birth, unlike some of the other sources that have been examined, which are quick to criticize birth models alternative to the technocratic model. In her opening chapter, which she titled “An Invitation”, she writes:

Consider this your invitation to learn about the true capacities of the female body during labour and birth. I’m not talking about a summary of current medical knowledge translated from technical to popular language. You can find plenty of that in bookstores. What I mean by *true capacities of the female body* are those that are experienced by real women, whether or not these abilities are recognized by medical authorities. The way I see it, the most trustworthy knowledge about women’s bodies combines the best of what medical science has offered over the past century or two with what women have always been able to learn about themselves before birth moved into hospitals. The purpose of this book is to point you toward the best information currently available about women’s real capacities in labour and birth and to show you how these can mesh with the most effective use of modern birth technology. My intention is to encourage and inform you. (Gaskin 2003:xi).

Gaskin’s Views on C-section

Gaskin touches on the topic of C-section several times throughout her book. She first mentions it in her opening chapter, when she notes that the women who seek her midwifery care expect to give birth vaginally, because The Farm’s C-section rate is only 1.4% (Gaskin 2003:xii). She compares this with the U.S. national caesarean rate of approximately 32.3% in 2007 and the instrumental delivery rate of approximately 10% in 2007. Later, she goes on to suggest that The Farm’s remarkably low C-section rate is achievable elsewhere, discussing other noteworthy medical practices with similar outcomes, several of which are run by physicians (Gaskin 2003:269).

She notes that the examples she discusses have a few things in common with The Farm, and she credits these elements with their overwhelmingly positive outcomes:

- Careful psychological preparation of the mother during pregnancy

- Births attended by midwives who are able to be with labouring women constantly
- Obstetrical backup provided by supportive physicians who recognize the abilities of midwives and women, and
- A philosophy that women are designed to give birth, something she describes as both beautiful and admirable (Gaskin 2003:270).

Beyond these philosophical elements Gaskin credits for The Farm's success, she also describes some of the techniques they use.

Our practice at The Farm Midwifery Center consists of some techniques and procedures that we learned from members of the medical profession and another set of techniques that, for the most part, we “dreamed up” ourselves. The second set of techniques (upright birth postures, pulling on overhead straps or bars while pushing the baby down, breast stimulation to contract the uterus, and the all-fours position for resolving shoulder dystocia, for instance) are all found in cultures where indigenous midwifery survives. ... I would say that we have tried to use the best that both traditional peoples and the medical world have to offer. Giving birth at home meant that we could be as flexible as possible (in the sense that we didn't have to be governed by idiotic social conventions, institutional habits or furniture), at the same time that we kept up on the medical literature and equipped ourselves with all of the portable technology that is useful for out-of-hospital births (blood pressure cuffs, antihemorrhage medication, oxygen bottles, suturing supplies, and sterile gloves, for instance). (Gaskin 2003: 271).

In providing both philosophical and more technical reasons for her practice's success, the point is made that best practices are still required to ensure the safety of women and their babies, but caring for them during labour and delivery is not something that can be managed exclusively by science.

Further on in the book, she also mentions the long list of complications and risks associated with C-sections, for both mother and baby, and it even consists of the complications that arise in pregnancies subsequent to a C-section delivery (Gaskin 2003:289-90). Her list is more extensive than the other books I read, and this is likely because her position is clear: C-section is a life-saving measure, and as such, surviving a

birth complication is the only benefit that would outweigh the extensive list of risks. She discusses an example of a maternal death by C-section caused by a nicked bowel during C-section, and notes that only one nurse who attended the case was comfortable telling her about this, as the others all feared for their jobs. She goes on to say that most people “are unaware that women ever die from caesarean operations, particularly when those surgeries are scheduled, rather than emergencies. Only rarely is a tragedy like this covered by the news media. Most maternal deaths in the United States are kept secret from the general public” (Gaskin 2003: 288). Regardless of whether this is true in Canada, the implication is quite grim. That said, the ultimate goal of conveying the severity of a caesarean birth is effective, in my opinion, because when 1 in 3 babies is born surgically, I think it is easy to lose sight of the fact that C-section is a major surgery.

Overall, this book was written with a narrative of empowerment. Gaskin provides facts and her philosophies on birth options in a way that conveys her position, which is pro-natural childbirth, but her tone is non-judgmental. She says that “[w]omen can hardly make truly informed decisions when some of the most relevant information is not available to them” (Gaskin 2003:288), a sentiment that I wholeheartedly agree with. That is why the information in the book is undoubtedly one-sided in its pro-natural birth philosophy—it essentially balances out all of the other information touted by popular pregnancy births which are disproportionately pro-biomedical management of pregnancy with their detailed explanations of the wonders of technological interventions in simplifying the process. Regardless of a woman’s perspective on the midwife versus OBGYN debate prior to reading the book, Gaskin has written a compelling book that anyone can learn from. Its strongest advantage over the other books is that it demystifies

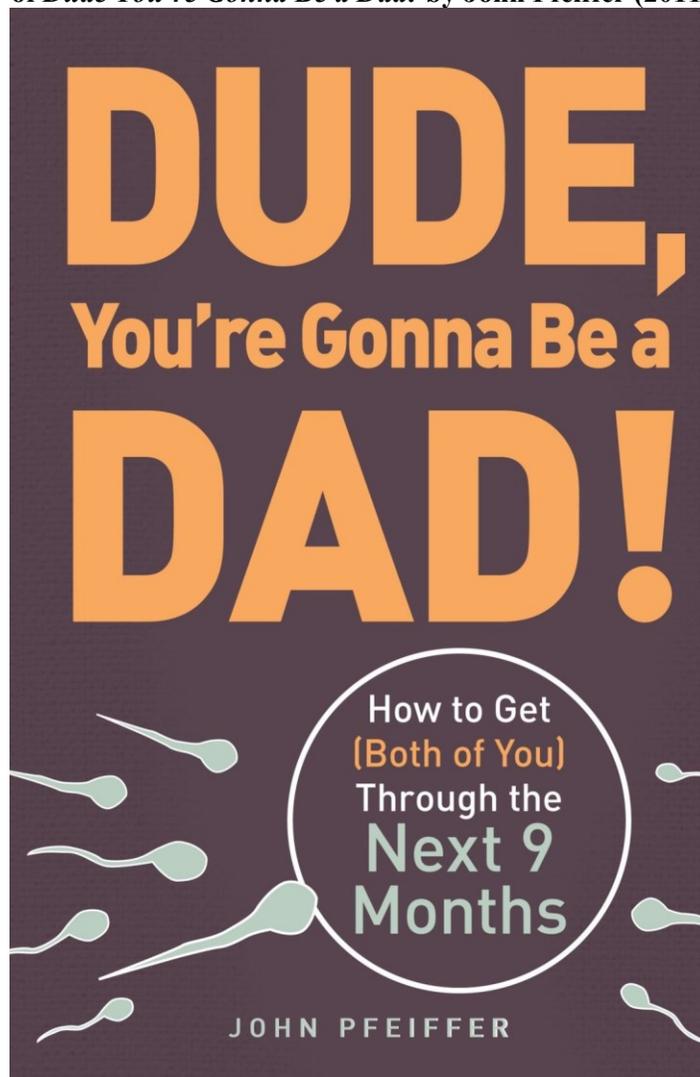
labour and delivery in a way that the others—which largely call for women to place their faith in the hands of their care providers—do not. Gaskin achieves this largely with her opening section, which boasts the inspirational stories of empowered birth from real mothers, some of whom were skeptics of midwifery or had skeptical partners in the beginning.

#5: Dude, You're Gonna Be a Dad!

Dude, You're Gonna Be a Dad (Pfeiffer 2011) is a pregnancy book written for a male audience. Based on the controversy of male perspectives in pregnancy-related narratives surrounding natural birth as evidenced by André Picard's popular opinion pieces in *The Globe and Mail*, I thought it would be relevant to assess something marketed for men, and being written by a 3-time father, I expected the book to be an account of pregnancy and a sort of 'what to expect when *she's* expecting' geared towards a male partner. While the book did accomplish this, I was not expecting the level of heteronormativity contained in its pages, and I admittedly was surprised at some of the language, which frankly describes women in a very unflattering way.

As such, this was perhaps the most perplexing read of all the books because of the way the narrative is presented. There were many more popular culture references and machismo sort of language, which I found interesting. For instance, the front cover of the book is an illustration of sperm meeting an ovum, with the subtitle "How to Get [Both of You] Through the Next 9 Months", simultaneously evoking ideas of male virility and leadership (see Figure 4.2).

Figure 4.2. Cover of *Dude You're Gonna Be a Dad!* by John Pfeiffer (2011)



Despite these undertones, the author continuously presents his information in a way that belittles the man's agency in the childbearing process, painting women as controlling and hysterical. Consider the following quotations from the book:

If you let it, the pregnancy game can swallow you up, leaving your [baby making partner] and her mother to make every decision. (Pfeiffer 2011:xi)

If you don't step up to the plate, it will quickly become apparent that you know nothing, and after rolling her eyes and exchanging knowing looks with her girlfriends, your partner will start making decisions for you. This will quickly lead to a pattern in which she'll think that either you're stupid and incompetent or you just don't care about your child. (Pfeiffer 2011:xiii)

Guys, it's time to wake up. You're in her world now. Once a woman decides to get pregnant, there's no stopping her, and your sexual preferences aren't on the agenda. So, although you're 50 percent of the biological equation, you get about 10 percent input in the process. (Pfeiffer 2011: 4)

Beyond what is most obviously problematic with the author's language—the negative connotations he implies about women—it was surprising that the book was entirely written without homosexual men in mind. It stands to reason that a book written in 2011 should consider this demographic of expectant parents. It was a bit perplexing that the author did not consider same-sex male couples as potential members of his audience, because the book is not exclusively about natural pregnancy between a man and woman. To the contrary, topics include suggestions about how to deliver news about an expected baby to family and friends, choosing a name, what to call grandparents, assembling cribs, baby safety, paternity leave, budgeting, pediatrics, day care, birth announcements, and advice about adjusting to life at home with a new baby, to name a few. Considering the myriad of ways that two men can create a family (including adoption and surrogacy), the exclusion of same-sex male couples from expectant father narratives indicates the text's hetero-normative assumptions.

'Manly' Advice about C-section

Pfeiffer does address C-section in one section of the book, and also mentions it when discussing birth planning and induction. Once again in a bit of a stab at women, he states:

Remember, you don't really get input, but you do serve as a listening post for *every* conceivable scenario. She'll decide whether the delivery will be vaginal or caesarean; in pain or drugged; in stirrups or handcuffs or with free movement, walk, stretch, or jump rope; with freedom to feast or ice chips; breastfeeding or bottle; circumcised or foreskin; and with an episiotomy or not. (When you learn what that last one means, you'll start to believe maybe

Eve did screw up in the Garden of Eden and God did punish accordingly).
(2011:93)

When discussing induction, he lists C-section as a potential risk associated with induction medications (Pfeiffer 2011:139).

Finally, in the 3-pages dedicated to C-section, Pfeiffer begins by listing potential reasons that may lead to a surgical delivery, followed by several paragraphs explaining the risks involved with the procedure. By and large, this information was presented in a neutral and informative way that was in line with the information provided in the other books I analyzed, although it was concise. While he did not explicitly say so, it seemed as though Pfeiffer assumed that men would not really need information about C-section, which was surprising considering that nearly one third of babies are delivered surgically (a fact he does not mention).

Overall, I found the language, the narrative about women, and the exclusion of same-sex male partners to be problematic aspects of this book. Despite this, my main goal in analyzing the book was to assess the information presented about C-section, which was surprisingly neutral and informative, despite lacking in detail, as I mentioned above.

Summary: Information from Books

Overall, the tone and language used in the books greatly influenced the way that the information was conveyed, and in a few cases, it was problematic. For instance, in *What to Expect When You're Expecting*, the authors' light-hearted treatment of C-section was almost perplexing. In *Dude You're Gonna Be a Dad*, Pfeiffer likened the man's role in decision making as uninvolved and almost coerced by the female partner.

Presentation of Risks

In *What to Expect When You're Expecting*, Murkoff and Mazel (2008) emphasize all risks in favour of a surgical birth outcome. They use risks as forensic resources, even for superficial and non-medical aesthetic risks, to emphasize what they consider to be the advantages of C-section. They fail to acknowledge how serious the procedure is. In this case, risks are used to justify C-section as a legitimate and routine alternative to vaginal delivery—a great disservice to proponents (including professional medical associations) of natural birth and a reduced national C-section rate.

Mayo Clinic Guide to a Healthy Pregnancy lists the conditions that may lead to a C-section, but by and large, the majority of the risks as forensic resources support limiting C-section to medically necessary situations. The book also includes an entire chapter dedicated to elective procedures, and within this chapter, the associated risks and complications are central tenets in the argument against opting for an elective C-section.

Ina May's Guide to Childbirth is the only book where all risks presented are used to discourage intervention and C-section. She emphasizes natural birth throughout the book, using evidence from her own experience at The Farm Midwifery Centre along with examples from physician-led home birth practices in the United States and abroad. She does not merely rely on describing risks either—she also uses narratives of encouragement and empowerment to emphasize women's physiological and psychological ability to undergo a zero-intervention birth, which is an element unique to this information source.

Finally, in *Dude You're Gonna Be a Dad*, for the most part risks are presented neutrally rather than in a way meant to support decision making. The author takes the position that all decision making is the responsibility of the woman and that men are

essentially ‘along for the ride, whether they like it or not.’ Despite this, Pfeiffer does list the risks associated with the procedure, namely to point out that the male partner will be expected to ‘step up his game’ and help out more during the longer, more complicated, and sexless recovery period (143).

Information from the Internet

While only 8% of respondents of the MES cited the internet as their most useful source of information during pregnancy, the survey was conducted at a time when the Internet was not as ubiquitous as it is today. Should the survey be repeated in 2016, this number would likely be much higher, particularly if we consider the popularity of mobile applications which can be used to track the progress of pregnancy, providing weekly updates about the baby and what to expect during that given week.

As discussed in Chapter 3, I initially performed a Google search of the term ‘C-section’, because I was curious about what the top results would be. Based on these results, I selected four of the top results, with the assumption that women would be likely to visit the sites that show up at the beginning of the search results. Not surprisingly, Wikipedia was the top result, followed by a few other popular pregnancy websites, including babycenter.com and webmd.com. I look at each of these sources in detail in this section.

Wikipedia

Wikipedia is a problematic resource for researching information since it is a collaborative site which is infamous for its openly editable content. Despite this, it is a popular resource, with over 375 million unique visitors in a given month (Wikipedia *n.d.a*). The contents of the page about C-section (Wikipedia *n.d.b*) include its uses, how

to prevent C-section, associated risks, classifications, technique, recovery, history, society and culture, and a section on special cases. Not surprisingly, Wikipedia contained very detailed information, for a diverse audience, and for the most part, the information I assessed was corroborated with reputable references and was consistent with the information I found from other sources.

Of note, the Wikipedia entry indicated that C-section should only be performed where medically indicated, citing the WHO in the opening paragraph. The page also acknowledges that C-sections result in increased poor outcomes in low risk pregnancies, although the specific language used— “C-sections result in a small overall increase in poor outcomes, in low risk pregnancies”—does seem to minimize the morbidity risks associated with surgical delivery. After corroborating this language with the original source (a web page from the American Congress of Obstetricians and Gynecologists and the Society for Maternal-Fetal Medicine), I felt that the statement was over-simplified in light of the complex morbidity and outcome information presented in the original source.

BabyCenter Canada

This site was developed for a Canadian audience based on its popular sister site in the United Kingdom. The site claims that it seeks to be the most trusted parenting resource, offering advice from expert sources including obstetricians, pediatricians, doctors, midwives and other parents (BabyCenter Canada 2012a). After performing a search of the term ‘C-section’ on the site, I selected the top hit for my analysis: an article titled “Caesarean Section Basics”.

The Basics of C-section according to BabyCenter Canada

The web page had several sections that organized information about C-section in a way consistent with other sources. They began with a concise description of the term, followed by sections about the difference between elective and emergency surgeries, and what to expect of the procedure, closing with a quiz to test the reader on whether they know what a C-section involves.

The information was presented in detail with clear language. While the site does note that the care provider should talk the patient through the procedure, the website nonetheless provided a detailed account of what to expect, including surgical preparation, what occurs during the procedure itself, and what will happen to the baby when it is born (i.e., that it will be taken momentarily to be examined, given an Apgar score, etc.). While most women may be aware of this, this was the only source I assessed that explicitly described the process, including the assessments performed on the infant.

Overall, I felt that this site provided the most neutral information, always including midwives in the narratives about the responsibilities of care providers. For example, where other sources might say “your doctor will”, this site consistently used language such as “your doctor or midwife will”. It was refreshing to see such a popular information source including care providers alternative to medical doctors in narratives surrounding maternal and infant care, because in my opinion this will ultimately contribute to the widespread acceptance of midwives as legitimate options for maternity care in Canada.

Web MD

The Web MD site contains an incredible amount of information in its C-section directory. Readers can choose from dozens of subtopics relating to surgical births, ranging from how a C-section is performed to 10 different subpages about VBAC (Web MD *n.d.*). Not surprisingly, the site discusses C-section as a normal potential outcome to labour and delivery, using language such as “Cesarean section is considered relatively safe” (Web MD 2014). While I suspect that this is in an attempt to assuage fear and worry in mothers faced with C-sections, it would be more appropriate to explicitly state that although the procedure is performed routinely and ‘is considered relatively safe’, it is still major surgery, and as such, it has considerable associated risks.

Overall, this site contained the greatest volume of information geared towards a lay audience. The information was well-organized and easy to understand, and was consistent with the information found in other sources. One advantage of this information source over the others (aside from Wikipedia) is that it included references right in the article, and it cited specific statistics to go along with the risks and complications associated with the procedure. For the most part, the other information sources I assessed listed the risks, but rarely provided statistics to corroborate them.

Presentation of Risks Online

All of the websites I analyzed presented risks in a very similar way to the professional medical associations and books discussed earlier. That is, they use risks as forensic resources in two ways: to justify medically necessary C-section and to outline the morbidity risks associated with the procedure itself. A notable exception is the

website Wikipedia, which I assessed because unsurprisingly, it is one of the first results that appeared for a Google search of the term “C-section”.

Risk is a prominent element on the site, with an extensive list of medical indications and risks associated with the procedure itself. While the page does emphasize that C-section should be reserved for only situations where medically necessary, the ‘medical uses’ section is not only extensive, it actually includes links to provide more detail on life-threatening pregnancy conditions. It struck me that information presented in this way would be perceived as fear-inducing, which may actually lead to women being *more* open to the idea of C-section if they are told that there is even the slightest risk to themselves or their baby if they deliver naturally. After all—who in their right mind would take a chance with their baby’s life if their frames of reference were the frightening and dangerous cases depicted online, often complete with images?

Conclusion

The purpose of this chapter has been to follow the quantitative findings of my research with an in-depth assessment of the sources of information that women consult during pregnancy. Using the qualitative description method, I discussed various information sources, including information from the professional associations of maternal care providers, books, and the Internet. This analysis addresses my research question of how risks surrounding C-section are represented in popular sources of information that women consult during pregnancy. The following chapter situates the findings from this analysis in the larger context of the risk discourses that are presented in Chapter 2, particularly within the context of the risks as forensic resources, as discussed by Mary

Douglas. This discussion is followed with a detailed assessment of the implications and contributions of this research.

Chapter 5: Discussion

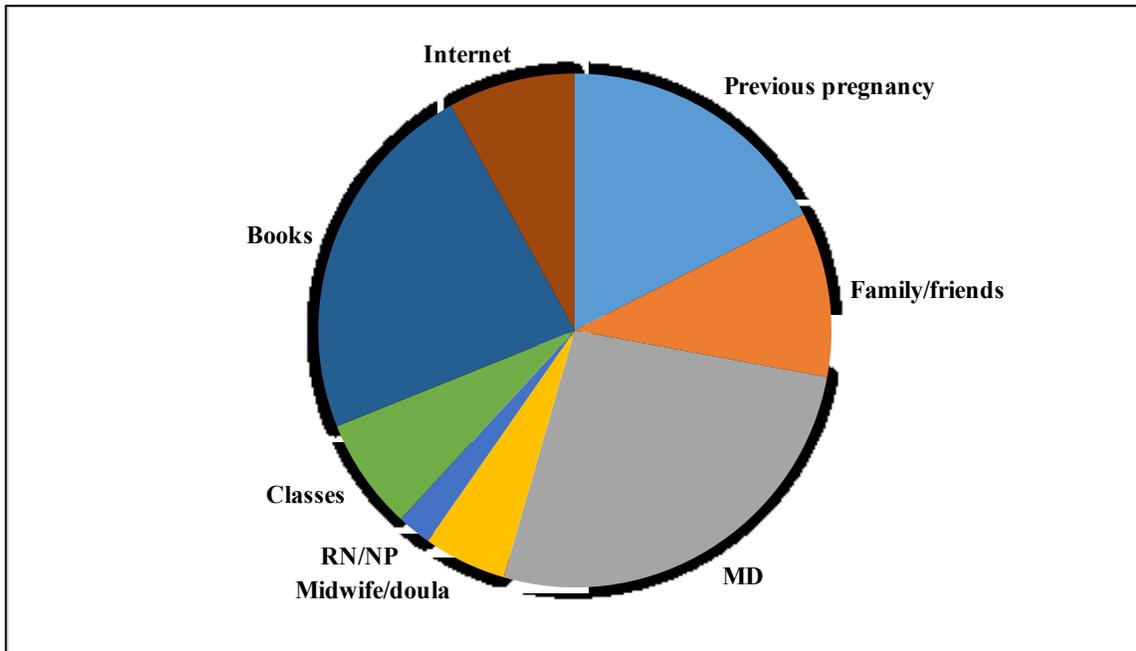
This chapter seeks to critically examine the findings of my research by interpreting results, explaining the implications of these findings and acknowledging the limitations of my research. To recap, the research questions examined by this thesis are: (1) What are the main sources of information that women draw from for pre- and post-natal decision making? (2) What sorts of risk discourses are embedded in various sources of information? How are the risks associated with C-section presented in these outlets? Finally, (3) How satisfied are women with the contemporary prenatal model in terms of the information available to them, and their own involvement in decision making processes throughout their pregnancies, labour and delivery, and postpartum experiences?

The following sections summarize the answers to each of the research questions with a discussion of the applicable qualitative and quantitative findings that are relevant to each. Within this discussion, I address the results of my analysis and their position within the context of the broader body of literature.

Sources of Information Women Draw from for Pre- and Post-Natal Decision Making

The MES was used to assess the types of information that women identify as most useful during pregnancy. Figure 5.1 summarizes these findings. The quantitative analysis found that the majority of pregnant women cite their doctors, books, previous pregnancies, family and friends, and the Internet respectively as their most valuable sources of information. Considering my broader interest in the role of information

Figure 5.1. Mothers' Most Valuable Source of Information, Canada, MES, 2006-2007



sources in decision making, it is interesting to note that physicians, who are nearly ubiquitous as maternal care providers, are simultaneously considered by so many women to be the most useful source of information. That is an unparalleled amount of influence in matters of maternal health.

That physicians are so influential in matters of maternal health is problematic if we consider the feminist push back against the medicalization of childbirth. As Robbie Davis-Floyd quotes from *Williams Obstetrics*, a popular medical textbook that is currently publishing its 23rd edition:

Obstetrics is the branch of medicine that deals with parturition, its antecedents, and its sequels (*Oxford English Dictionary* 1993). It is concerned principally, therefore, with the phenomena and management of pregnancy, labor, and the puerperium, in both normal and abnormal circumstances. In a broader sense, obstetrics is concerned with the reproduction of a society. (Davis-Floyd 2003:45)

Given the level of power that is claimed by this technocratic institution that has been predominantly male since the 17th century, it is unsurprising that we have witnessed a feminist movement challenging the medicalization of birth in recent history. The quantitative findings also revealed that women who sought information from any source other than their care provider were less likely to be satisfied with the information provided by the care providers themselves. As discussed in the previous chapter, this means that women who seek information from sources aside from a physician are more likely to be satisfied with that information, implying that something may be lacking from the information translated to patients, or perhaps speaking to the different sets of expectations that women may have if they are active in their information seeking, compared to those who rely exclusively on their OBGYN.

The intricate relationship between women and their care providers is likely best understood through a risk theory lens that emphasizes power relations. As discussed previously, an underlying drive for power and authority is a central tenet of governmentality, and as such, when risk discourses are used as forensic resources, they become strategies for disciplinary power. Regardless of whether risks achieve the status of disciplinary power explicitly or inadvertently through these sources of information, a consequence of the expert knowledges that care providers in a medicalized context exert on expectant mothers is an altered power-authority dynamic between the expert and lay person (in this case, the mother). It is troubling then, to think that dominant medicalized views of pregnancy and birthing processes are the ones that are ultimately being absorbed and used to make decisions, particularly if we consider that the quantitative results of this analysis suggest that in many cases, Canadian women are less than satisfied with both

their own involvement in decision making, and with the information they receive from their care providers.

Davis-Floyd (2003) also discusses the ways in which medicine took on the challenge of changing how we conceive of ourselves—from the organic human body into a machine—a transformation, she argues, that was crucial to the development of Western society (45). I argue that the transformation to technocratic treatment of the human body was also influenced by risk. Theories of risk have evolved dramatically since the 17th century, shifting from probability, losses, and gains, to contemporary conceptions of risk, which largely imply danger, and are used to assess the dangers ahead (Douglas 1990:5).

Mary Douglas also discusses risks as forensic resources, which is particularly relevant to the discussion of the technocratization of the maternal body. Forensic resources provide explanations for things that have gone wrong, or for unfortunate events that are foreseen to occur. She describes conceptualizing risks in this way as problematic because while risks have undoubtedly acquired new prominence in the industrial world in the contemporary era, countless other forms of risk have decreased, as indicated by data for mortality and morbidity (Douglas 1990). Consequently, we live in a world of negative connotations associated with risks that are often exaggerated.

The next phase of my research explores this idea more deeply by questioning the sorts of risk discourses that are embedded in various sources of information, specifically as they relate to C-section. It is important to be cognizant of the sources of information that women draw from, since these inevitably influence decision making.

Chapter 4 consists of results of the qualitative description analysis of three avenues of information that women identified as useful during pregnancy: physicians,

books, and the Internet. The analysis paid particular attention to the language that was used, whether it fostered or encouraged women to be active participants in their care, and how risks were translated. Using Mary Douglas' concept of risks as forensic resources (1990), I identified that all sources I analyzed used risks to warn of impending danger. Interestingly, there were two facets to this. Risks as forensic resources were used to legitimize the use of C-section, but also to iterate the complications associated with the procedure, which actually may discourage C-section in some cases, particularly elective ones.

Two source of information stand out as using risks as forensic resources to legitimize the widespread use of C-section: the book *What to Expect When You're Expecting* and the Wikipedia entry for C-section.

Information Laden with Risks: How is C-section Presented in Popular Information Sources?

Following a basic identification of the sources of information that women draw from during pregnancy, my subsequent research questions are: What sorts of risk discourses are embedded in various sources of information, and how are the risks associated with C-section presented in these outlets? To answer these questions, I used qualitative description to analyze three popular information outlets: physicians, books, and the Internet. All of these sources used risks as forensic resources like Mary Douglas (1990) describes. In other words, risks are presented in a way that seeks to explain things that have gone wrong, or for unfortunate events that are foreseen to occur. In this case, that means using risks to justify the need for C-section. In all of the sources except for one (*What to Expect When You're Expecting*), risks are also used as forensic resources to emphasize the morbidity and complications associated with the procedure itself, a

mechanism that serves to rightfully convey the severity of surgical birthing intervention. This may discourage women contemplating an elective C-section from making the decision lightly. To my knowledge, no existing literature looks at the way in which risks are translated to individuals through various information sources, and the impact of this on decision making, particularly in matters of maternal health. This is an area that would benefit from further research.

My final research question is: How satisfied are women with the contemporary prenatal model in terms of the information available to them, and their own involvement in decision making processes throughout their pregnancies, labour and delivery, and postpartum experiences? To answer the first part of this question, I used the MES to analyze women's responses to a question that asked them whether they were satisfied with the information they received from their care providers. Recall that in over 90% of cases, this refers directly to information provided by physicians (PHAC 2009b:8). The results were that women who were cared for by midwives were more likely to be satisfied with the information they were provided with than women who saw OBGYNs. I discuss some of the possible reasons for this in Chapter 4, including a hypothesis that time spent with patients during routine visits may play a part in this.

Also interesting was the finding that women who had unplanned C-sections were much less likely to be satisfied with their care provider's information. This directly links the value of the information provided by physicians to C-section. Perhaps it has to do with feeling as though they were somehow less prepared, or perhaps that they did not have a choice since their situation was likely emergent.

Finally, the MES analysis revealed that women who sought information from any source other than their care provider were less likely to be satisfied with the information provided by the care providers themselves. This has interesting implications, as it may indicate that women feel as though the information they receive from their care providers is somehow incomplete, so they supplement it with information from other sources. The trouble with some of the alternative sources they may be using however is that the validity of the content is debatable. For instance, if women turn to a book such as *What to Expect When You're Expecting*, which is arguably the most common pregnancy book currently in circulation, they may be receiving information that is pro-intervention, which is in direct conflict to the joint policy statement released by SOGC with support from other professional maternity care stakeholders, including family physicians, nurses and midwives. Or, should they turn to a questionable online source such as Wikipedia, they may come across frightening images of pregnancy complications that would cause undue worry and stress.

I think there is a definite key link between the information available to women and the fact that 1 in 3 pregnancies ends in C-section. Particularly if we consider the facts presented in Ina May Gaskin's book, it is perplexing that so many pregnancies end so drastically when her own C-section rate is only about 1%. While the argument may be made that her rates are biased since midwives likely only care for the low-risk pregnancies, Gaskin's argument for minimal intervention is compelling since for the most part, interventions—particularly induction, which is performed quite often—is a leading cause of C-section. Lake and Epstein (2008) explore this relationship in their popular documentary *The Business of Being Born*.

Decision making in Pregnancy

One of my main goals in approaching this topic of inquiry was to better understand the impact of all of these sources of information on decision making during pregnancy, particularly surrounding surgical birthing interventions. While it was not easy to make this link directly based on the secondary data available via the MES, I was able to assess women's level of satisfaction with their involvement in decision making with their care providers, using their preferred source of information as a covariate. The results revealed that women whose preferred source of information came from family or friends, classes, books, and the Internet were much less likely to be satisfied with their involvement in decision making than women who got their information from a physician. This is a particularly relevant finding, because it implies that women whose preferred source of information was their physician—approximately 27% of women—were not only pleased with the information they received, but this source of information was sort of protective in nature, increasing their likelihood of feeling as though they played a valuable role in decision making. This could be a revelation of the role of expectations, which may differ based on women's information seeking practices. This ultimately gets at the idea of empowering pregnant women, which is something Gaskin (2003) is a proponent of as a means of encouraging natural birth.

Interestingly, although the results were not statistically significant, women whose preferred source of information was a midwife were the most likely to be satisfied with their role in decision making. This is likely due to the emphasis of joint decision making in midwifery practice, a topic which is explored extensively in the existing literature (see Jefford, Fahy and Sundin 2010; Shaw 2013 as examples).

Limitations

While I addressed limitations and areas that require further inquiry throughout this work, I will summarize the limitations of this study here. Using the MES was a bit of a double-edged sword for the purpose of this study. While the survey is unique in content, the data was collected in 2006-2007, so it is not as recent as would be ideal. Furthermore, since the database is quantitative, there is no way of clarifying respondents' answers. This was a disadvantage in several instances, which I list below:

- There was no way of assessing whether women drew on multiple sources of information – for example, perhaps physicians recommended certain books or websites. If this was the case, how would the woman have replied to a question about the most valuable source of information? Would she cite the doctor, or the book?
- I was unable to determine why women preferred one source of information over another. It would be interesting to hear directly from women about what they found lacking from a given source of information, and how they filled the gap (i.e., did they clarify with a physician? Did they seek another source of information?)
- How did women evaluate the validity of their preferred data sources? Particularly with online sources, how were women sure that they were using a source that had reliable information? Was this even a concern?

While there is quantitative data available at the administrative level, namely from organizations such as the CIHI and the Better Outcomes Registry & Network of Ontario (BORN Ontario) for provincial-level data, these databases do not provide the same level

of detail that is possible with survey data, because ecological information for variables such as socioeconomic status are limited.

Finally, while the MES was effective in allowing me to identify and ascertain women's satisfaction with various sources of information, there is no way of knowing the specific information women received via these outlets. While I made some concessions here by analyzing popular information sources based on what women identified in the MES, it would have been ideal to assess the specific information women received—for instance, what exactly did their doctors tell them? Which books did they read? Which websites did they frequent? In light of this, it would also be interesting to know how information sources were selected. These are all areas that would benefit from further research.

Conclusion

The purpose of this chapter has been to integrate the quantitative and qualitative phases of my mixed methods approach in order to cohesively discuss the findings within the context of the established literature. The most valuable contribution of this research is the establishment of a plausible link between the information available to women and the alarming national C-section rate. I have explored this link by addressing women's sociodemographic tendencies towards C-section along with their levels of satisfaction with various elements of their maternity care using data from the MES. I followed this analysis with a survey of the risk discourses present in several popular sources of information that women must navigate to support their decision making. The following chapter concludes this thesis by briefly revisiting the overall objectives of the research and suggesting some areas that would benefit from future inquiry.

Chapter 6: Conclusion

Given the volumes of scientific evidence showing that standard obstetrical procedures do more harm than good, why do they continue to be used? Thousands of mothers, childbirth activists, and health care practitioners recognize the irrationality of the technomedical management of childbirth, the damage it does to mothers and babies, and the millions of dollars unnecessarily spent to maintain it. They have long been frustrated by their inability not only to change the situation but even to explain it. Why are so many women's labors artificially induced or augmented when these practices have been demonstrated to cause unnecessary labor complications? Why is electronic fetal monitoring so widely and routinely used when scientific evidence shows that at the very least it doubles the caesarean rate without improving outcomes? And why do many women still have to give birth in supine positions, when three decades of evidence indicate that upright positions for birth are far more physiologically efficacious?

- Robbie Davis-Floyd (2003)

Davis-Floyd proclaims that the many questions in the quote above were the impetus for her seminal book *Birth as an American Right of Passage*. Similar questions motivated this thesis, particularly those surrounding the link between the medicalized state of birth in Canada and the alarming national C-section rate, which is currently 27.3% according to the CIHI (2014b). I recall being specifically motivated to pursue sociological research in the area of maternal health after reading about Canada's deteriorating maternal and newborn health. As I mentioned in my introductory chapter, from as early as 2002, the Organization for Economic Co-Operation and Development (OECD) has reported that maternal and newborn health in Canada were deteriorating, with Canada's international ranking declining on several key indicators, including infant and maternal mortality. Compared to a decade earlier, rates of infant mortality plunged from sixth to twenty-first, and maternal mortality slipped from second to eleventh (Haworth-Brockman, Clow, and Beck 2012). Being perplexed by these rankings, particularly given the fact that hospitalization is the #1 reason that women seek health care in Canada, I explored the

established literature only to identify a gaping under-researched area where sociological analysis should be. Remarking that sociocultural risk theorists had only grazed the surface with theoretical analyses, I identified my niche and chose to conduct what I consider to be an ambitious mixed methods empirical study which establishes a link between the competing risk rationalities that women face when they are expecting and the alarming national C-section rate.

In a recent article, Lupton and Schmied identify the same gap in the established literature: “[t]here are surprisingly few sociological studies into women’s experiences of Caesarean sections” (2013:83). This project has undertaken this task by seeking to identify the key underlying sociodemographic factors which act as determinants in information availability and decision making, while focusing on the competing risk rationalities that women must navigate when they are faced with decision making during labour and delivery. Regardless of whether women must give consent for a C-section that is planned or in response to emergent complications during labour, I have assessed the ways in which women respond to and interact with competing risk rationalities in order to make decisions.

Future Research Recommendations

Given the magnitude of this issue, it is no surprise that I have identified several areas that would benefit from further research. First, my results revealed that women who were cared for by midwives were more likely to be satisfied with the information they were provided with than women who saw OBGYNs. While I discuss some of the possible reasons for this in Chapter 4, this is another area that would benefit from further qualitative inquiry into the perspectives of women who prefer midwifery information. It would be interesting to better understand which specific elements of the information women find superior to others.

Also interesting was the finding that women who had unplanned C-sections were much less likely to be satisfied with their care provider's information. This directly links the value of the information provided by physicians to C-section. Once again, a clearer picture of why exactly women who had unplanned C-sections were less satisfied with the information provided by their care providers would be invaluable. Perhaps it has to do with feeling as though they were somehow less prepared, or perhaps that they did not have a choice since their situation was likely emergent.

Finally, one of my main goals in approaching this topic of inquiry was to better understand the impact of various sources of information on decision making during pregnancy, particularly as it relates to C-section. This ultimately gets at the idea of empowering pregnant women with information, which is something Gaskin (2003) is a proponent of as a means of encouraging natural birth. This area of inquiry would benefit from further qualitative research to assess whether the information itself contributed to women's feelings of satisfaction with their role in decision making.

Not surprisingly, a recurring theme throughout this thesis has been that opinions surrounding C-section among care providers, policy makers, and expectant mothers are often polarized when it comes to asserting whether they accomplish their objective of mitigating risks—many feel that they actually add an additional, and unnecessary, layer of risk that could be avoided with minimal intervention birthing policies. I think that this debate really speaks to the value of this research, because as a recent article notes: it is not the medically necessary C-sections that are worrisome for researchers and health organizations, but rather we should be focusing on diminishing the routine *misuse* of C-section for low-risk pregnancies (Murphy 2015). Unfortunately, what constitutes things

like 'misuse of C-section' and 'low-risk' versus 'high-risk' pregnancy remains both contentious and ambiguous.

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Appendix A. Variable Codebook

age_grp = Age group of mother at time of birth of last child

- 15-24 (ref)
- 25-29
- 30-34
- 35+

postsec = Mother's level of education

- high school diploma or less/no postsecondary (ref)
- some postsecondary education or greater

region = Region of birth (provinces collapsed down due to sample size)

- Ontario (ref)
- Atlantic Canada (NL, PEI, NS, NB)
- Quebec
- Manitoba, Saskatchewan + territories
- Alberta
- British Columbia

cma = Census dissemination area

- Non-CMA: rural areas, urban populations with populations less than 100,000 (ref)
- Small CMA: CMA w. a population less than 500,000
- Large CMA: CMA w. a population of 500,000 or greater

income = estimated total annual household income (gross)

- Less than \$30,000 (ref)
- \$30,000-49,999
- \$50,000-79,999
- \$80,000-99,999
- \$100,000+

provider = Type of healthcare provider from whom the majority of prenatal care visits were received

- OBGYN (obstetricians and gynaecologists included here)
- Other MD
- Midwife
- Other

provider_MD = Type of healthcare provider from whom the majority of prenatal care visits were received (excludes 'other category' due to small sample size)

- OBGYN (obstetricians and gynaecologists included here)
- Other MD
- Midwife

info_sourcep = Most useful source of information about pregnancy, labour and birth

- Medical doctor, including OBGYN, GP, etc. (ref)
- Family/friends
- Midwife/doula
- Nurse/NP
- Classes
- Books
- Internet

vag_csxn = Type of birth

- Vaginal birth (ref)
- C-section: includes planned (for medical and elective reasons) and unplanned

parity = number of previous births

- Primiparous (ref)
- multiparous

vsinfo = Satisfaction with information given by healthcare provider (during entire pregnancy, labour and birth, and immediate postpartum experience)

- less than 'very satisfied' (ref)
- very satisfied

vsdec = Satisfaction with involvement in decision making with healthcare provider (during entire pregnancy, labour and birth, and immediate postpartum experience)

- less than 'very satisfied' (ref)
- very satisfied

type = type of C-section

- planned: includes those planned for medical and elective reasons (ref)
- unplanned: includes all unplanned C-sections, regardless of whether the woman attempted vaginal delivery or not

Appendix B. Ethics Clearance Forms



Carleton University
Research Ethics Office
Research Ethics Board
511 Tory, 1125 Colonel By Drive
Ottawa, ON K1S 5B6 Canada
Tel: 613-520-2517, ethics@carleton.ca

Ethics Clearance Form – New Clearance (Secondary Use of Data)

This is to certify that the Carleton University Research Ethics Board has examined the application for ethical clearance. The REB found the research project to meet appropriate ethical standards as outlined in the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Human, 2nd edition*, and the *Carleton University Policies and Procedures for the Ethical Conduct of Research*.

Date of Clearance: January 23, 2015

Researcher: Victoria Spofford (Student Research: Master's Student)

Department: Faculty of Arts and Social Sciences\Sociology and Anthropology (Department of)

University: Carleton University

Research Supervisor (if applicable): Dr. Leslie-Anne Keown and Dr. Steven G Prus

Project Number: 102497

Alternate File Number (if applicable):

Project Title: Exploring the Competing Risk Rationalities Surrounding Surgical Birthing Interventions: The Risk Positions of Expectant Mothers and Issues Surrounding Informed Choice

Funder (if applicable):

Clearance Expires: May 31, 2015

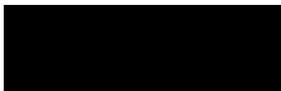
All researchers are governed by the following conditions:

Annual Status Report: You are required to submit an Annual Status Report to either renew clearance or close the file. Failure to submit the Annual Status Report will result in the immediate suspension of the project. Funded projects will have accounts suspended until the report is submitted and approved.

Changes to the project: Any changes to the project must be submitted to the Carleton University Research Ethics Board for approval. All changes must be approved prior to the continuance of the research.

Adverse events: Should a participant suffer adversely from their participation in the project you are required to report the matter to the Carleton University Research Ethics Board. You must submit a written record of the event and indicate what steps you have taken to resolve the situation.

Suspension or termination of clearance: Failure to conduct the research in accordance with the principles of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, 2nd edition* and the *Carleton University Policies and Procedures for the Ethical Conduct of Research* may result in the suspension or termination of the research project.



Louise Heslop

Chair, Carleton University Research Ethics Board



Andy Adler

Vice-Chair, Carleton University Research Ethics Board

Ethics Clearance Form – Clearance Renewal

This is to certify that the Carleton University Research Ethics Board has examined the application for ethical clearance. The REB found the research project to meet appropriate ethical standards as outlined in the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Human, 2nd edition*, and the *Carleton University Policies and Procedures for the Ethical Conduct of Research*.

Original Date of Clearance: January 23, 2015

Renewal Date of Clearance: May 01, 2015

Researcher: Victoria Spofford (Student Research: Master's Student)

Department: Faculty of Arts and Social Sciences\Sociology and Anthropology (Department of)
University: Carleton University

Research Supervisor (if applicable): Dr. Leslie-Anne Keown and Prof. Steven G. Prus

Project Number: 102497

Alternate File Number (if applicable):

Project Title: Exploring the Competing Risk Rationalities Surrounding Surgical Birthing Interventions: The Risk Positions of Expectant Mothers and Issues Surrounding Informed Choice

Funder (if applicable):

Clearance Expires: May 31, 2016

All researchers are governed by the following conditions:

Annual Status Report: You are required to submit an Annual Status Report to either renew clearance or close the file. Failure to submit the Annual Status Report will result in the immediate suspension of the project. Funded projects will have accounts suspended until the report is submitted and approved.

Changes to the project: Any changes to the project must be submitted to the Carleton University Research Ethics Board for approval. All changes must be approved prior to the continuance of the research.

Adverse events: Should a participant suffer adversely from their participation in the project you are required to report the matter to the Carleton University Research Ethics Board. You must submit a written record of the event and indicate what steps you have taken to resolve the situation.

Suspension or termination of clearance: Failure to conduct the research in accordance with the principles of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, 2nd edition* and the *Carleton University Policies and Procedures for the Ethical Conduct of Research* may result in the suspension or termination of the research project.



Louise Heslop

Chair, Carleton University Research Ethics Board



Andy Adler

Vice-Chair, Carleton University Research Ethics Board