

**DECIDING WHEN IT'S LABOUR:  
THE EXPERIENCE OF WOMEN WHO HAVE RECEIVED  
ANTEPARTUM CARE AT HOME**

by

M. LYNNE PALMER

Diploma in Nursing, Vancouver General Hospital, 1978  
BScN, The University of Victoria, 1997

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF

**MASTER OF SCIENCE IN NURSING**

in

THE FACULTY OF GRADUATE STUDIES

(Nursing)

THE UNIVERSITY OF BRITISH COLUMBIA

January 2005

© M. Lynne Palmer, 2005

### Abstract

Antepartum care at home, including self-assessment teaching and help-seeking guidelines, replaces hospital care for some Canadian women who have a diagnosis of preterm labour. It is not known how these women decide if they are experiencing a subsequent episode of labour or whether or not they should seek help. The purpose of this study was to describe the decision-making process used by women to identify and respond to a subsequent episode of labour when they had received antepartum care at home for preterm labour prior to 34 weeks gestation. Grounded theory was chosen as the research method.

Twelve women were interviewed, and interview transcriptions and their self-kept symptom records were analyzed. "Reconciling body knowledge and professional knowledge" was found to be the core psychosocial process that these women used to decide if their symptoms represented labour and whether or not to seek help. Women in the study described, "knowing something's not right" as they used their body knowledge to appraise a change in symptoms compared to their baseline symptoms. Study participants used help-seeking guidelines to decide when to return to hospital for the first episode of symptoms after receiving antepartum care at home. However, when they returned to hospital to "see what's going on," and body knowledge did not coincide with professional knowledge, an overriding tension between not wanting to take a risk for the baby versus not wanting to over-react, influenced their future decisions. These women re-established their baselines of nonthreatening symptoms at a higher level by "setting a new normal" to decide if future episodes represented labour. Reconciling body knowledge and professional knowledge was a deliberate strategy used by these women to prevent humiliation associated with appearing to over-react.

Research findings offer guidance to health care professionals to respond optimally to the emotional needs of women experiencing recurrent preterm labour symptoms. Greater understanding of why women delay help-seeking illuminates the importance of buffering factors that cause women to doubt their body knowledge. Nursing interventions should be geared to reducing anxiety and reinforcing beliefs in self-efficacy related to identifying labour and seeking help in a timely fashion.

## Table of Contents

Abstract.....	ii
Table of Contents.....	iii
List of Tables.....	v
List of Figures.....	vi
Acknowledgements.....	vii
Chapter I. Overview and Summary.....	1
1.1. Introduction and Background to the Problem.....	1
1.2. Problem Statement.....	2
1.3. Purpose.....	3
1.4. Research Questions.....	3
1.5. Theoretical Framework.....	3
1.6. Literature Review.....	4
1.6.1. Quantitative Research Related to Identification of Preterm Labour.....	4
1.6.2. Antepartum Care at Home Programs.....	7
1.6.3. Qualitative Research Related to Identification of Preterm Labour.....	7
1.7. Orienting Definitions of Terms.....	9
1.7.1. Antepartum Care at Home Programs.....	9
1.7.2. Preterm Labour.....	9
1.7.3. Preterm Birth.....	10
1.8. Assumptions.....	10
1.9. Significance.....	10
1.10. Limitations.....	11
1.11. Summary.....	12
Chapter II. Methods.....	13
2.1. Introduction.....	13
2.2. Research Design.....	13
2.3. Sample Selection.....	15
2.3.1. Eligibility Criteria.....	15
2.3.2. Sample Size.....	16
2.3.3. Recruitment.....	16
2.3.4. Setting.....	17
2.4. Data Collection.....	17
2.4.1. Interviews.....	17
2.4.2. Field Notes.....	19
2.4.3. Demographic and Pregnancy Related Characteristics.....	19
2.4.4. Patient Recording Chart.....	19
2.5. Data Analysis.....	20
2.5.1. Open Coding.....	20
2.5.2. Axial Coding.....	21

2.5.3. Selective Coding.....	22
2.5.4. Additional Analytic Procedures.....	23
2.5.4.1. Memo writing.....	23
2.5.4.2. Document analysis.....	24
2.5.4.3. Diagramming.....	24
2.6. Techniques to Establish Trustworthiness.....	24
2.6.1. Credibility.....	25
2.6.2. Transferability.....	26
2.6.3. Dependability and Confirmability.....	27
2.7. Ethical Considerations.....	27
2.8. Summary.....	29
Chapter III. Findings and Discussion.....	30
3.1. Introduction.....	30
3.2. Demographics and Pregnancy Related Characteristics.....	30
3.3. Reconciliation Between Body Knowledge and Professional Knowledge.....	33
3.4. Knowing Something's Not Right.....	39
3.4.1. Noticing a Sudden Change.....	44
3.4.2. Waiting to See if it Stops.....	47
3.5. Seeing What's Going On.....	52
3.5.1. Expecting to be Believed.....	58
3.5.2. Wanting More Information.....	64
3.6. Setting a New Normal.....	69
3.6.1. Relying on Professional Knowledge.....	74
3.6.2. Wanting to Get it Over With.....	79
3.6.3. Trusting Your Gut.....	83
3.7. Restarting the Process.....	87
3.8. The Process of Reconciliation.....	91
3.9. Additional Findings.....	96
3.10. Summary.....	98
Chapter IV. Recommendations for Nursing and Conclusion.....	101
4.1. Introduction.....	101
4.2. Implications for Nursing Practice.....	102
4.3. Implications for Nursing Education.....	105
4.4. Implications for Nursing Research.....	107
4.5. Conclusion.....	110
References.....	113
Appendix A Glossary.....	118
Appendix B Information Letter.....	120
Appendix C Consent Form.....	121
Appendix D Interview Guide.....	124
Appendix E Demographic and Pregnancy Related Survey.....	125

## List of Tables

Table 3.1. Demographic and pregnancy related characteristics.....	31
---	----

## **List of Figures**

Figure 2.1. Diagram depicting the points at which data collection occurred.....	19
Figure 3.2. Reconciling body knowledge and professional knowledge.....	34

## Acknowledgements

My sincere appreciation goes to the members of my thesis committee: Elaine Carty, Wendy Hall, and Marion Clauson. They gave me freedom and encouragement to move along in the research process and timely critique that was invaluable in editing my work. I also thank the Xi Eta Chapter of Sigma Theta Tau and the University of British Columbia School of Nursing Sheena Davidson Nursing Research Fund for financial assistance in carrying out my research.

I extend heartfelt thanks to my friends and colleagues from both antepartum care at home programs. I appreciated their continual assistance in recruiting study participants and I value the unique contributions that each antepartum nurse brings to the home care programs. The dedication and compassion with which they care for women with high-risk conditions of pregnancy is admirable.

Special thanks goes to the women who freely shared their stories with me. The commitment that these women make to motherhood before the expected date of confinement requires bravery and selflessness. I am in awe of the endless hours they spend nurturing their babies in the womb.

I am grateful for the opportunity to have continued my education with my four exceptional children. Kasandra, Sheree, Janice, and Troy have shown interest in how this research project evolved and they patiently understood the time commitment required to complete it. A huge thanks to my loving husband, Booth, who not only tolerates, but also supports my endless hunger for learning.

## CHAPTER 1

### Overview and Summary

#### *Introduction and Background to the Problem*

Great strides have been made towards understanding the mechanisms underlying preterm labour, yet Canada and the United States have seen a gradual increase in the incidence of preterm birth (Health Canada, 2003; Lockwood, 2002; National Center for Health Statistics, 2003). Preterm birth is one of the most significant perinatal health problems in developed nations and accounts for 60-80 percent of all perinatal mortality in Canada (Health Canada). Health Canada reports that in 1981, 6.4 percent of Canadian babies were born prior to a gestational age of 37 weeks, and by 2000 that rate had crept to 7.6 percent. Early detection of preterm labour is key to reducing morbidity and mortality related to preterm birth because more advanced preterm labour is more difficult to stop (Enkin et al., 2000). Early recognition allows time for administration of glucocorticoids, group B hemolytic streptococcus prophylaxis, and transfer to a facility that is prepared to care for preterm newborns (Iams, 2003). The question remains: How can health care providers facilitate early detection of preterm labour?

Diagnosing preterm labour that will progress to preterm birth rather than stop is recognized by nurses and physicians as one of the most challenging aspects of care for women who report preterm labour symptoms (Abrahams & Katz, 2002; Enkin et al., 2000). Coupled with the nebulous features that define the onset of labour, subtle preterm labour symptoms, which resemble some of the normal discomforts of pregnancy, confuse both health care providers and pregnant women, contributing to a delay in treatment (Abrahams & Katz, ; Iams, 1998, 2003; Moore & Freda, 1998; Patterson, Douglas, Patterson, & Bradle,



1992; Weiss, Saks, & Harris, 2002). Moore and Freda recommend that further research be conducted to determine which type of uterine activity is more likely to cause cervical changes that lead to preterm birth, and which type of uterine activity can be ignored.

Women experiencing a first episode of preterm labour go through a process dominated by uncertainty which delays seeking health care services (Coster-Schulz & Mackey, 1998; Mackey & Coster-Schulz, 1992; Moore & Freda, 1998; Patterson et al., 1992; Weiss et al., 2002). Theories derived from previous qualitative research explain how women come to know that they are experiencing a first episode of preterm labour and how they use that knowledge to manage symptoms and eventually seek help (Coster-Schulz & Mackey; Mackey & Coster-Schulz; Patterson et al.; Weiss et al.). However, it is not known how women identify a subsequent episode of labour when they have been involved in a program that attempts to reduce uncertainty by teaching self-assessment skills and warning signs of when to seek help. In Canada, antepartum care at home programs are becoming a popular substitute for hospital care for women with preterm labour (for examples see, Goulet et al., 2001; Harrison et al., 2001; Heaman, Dacombe, Thompson, Helewa, & Wiesner, 1995; Salvador et al., 2003; West, Palmer, & Tier, 2000). These programs are designed to educate women in self-assessment protocols and indications that would signal the need to return to the hospital for more intense surveillance.

### ***Problem Statement***

It is not known how women who have received antepartum care at home detect early signs of preterm labour and decide whether or not to seek help. Qualitative research, which could fill this gap in knowledge, has the potential to give direction to health care providers who are in a position to acknowledge uncertainty about the significance of preterm labour

symptoms and to provide supportive nursing care to women who experience several episodes of preterm labour.

### ***Purpose***

The purpose of this study is to describe the decision-making process women use to identify and respond to a subsequent episode of preterm labour when they have received antepartum care at home for preterm labour prior to 34 weeks gestation.

### ***Research Questions***

1. How do women who have received antepartum care at home for preterm labour prior to 34 weeks gestation identify a subsequent episode of labour?
2. What factors influence this process of identifying a subsequent episode of labour?
3. What factors influence the decision made by these women to seek help or delay help-seeking when they have identified that they are in labour?

### ***Theoretical Framework***

Symbolic interactionism is the theoretical framework that informs the qualitative method chosen to explore these research questions. George Herbert Mead (1863-1931) first described the principles of symbolic interactionism, and his students extended his work and published his theoretical perspectives (Fernandez, 2003). Symbolic interactionism assumes that individuals continually attempt to interpret events and stimuli in their environment. Through a process of interpreting the symbols created through social interaction, individuals derive meaning. It is the meaning that individuals form from their interpretation of symbols that guide them in determining action (Schwandt, 2001). In this study, the processes of developing meaning and decision making undertaken by women who have received antepartum care at home will be analyzed. Participants' interpretation of the symbols that are

created through social interactions will be explored to describe how these interactions influence how they identify labour and what actions they take.

### *Literature Review*

#### *Quantitative Research Related to Identification of Preterm Labour*

Frequency of symptoms heralding the onset of preterm labour has been studied quantitatively. Symptoms of 100 women diagnosed with preterm labour were compared with 100 women without preterm labour (Katz, Goodyear, & Creasy, 1990). Uterine contractions, menstrual cramps, constant backache and pelvic pressure, a change in vaginal discharge, and increased frequency of urination were reported significantly more often by women recalling the seven days prior to a diagnosis of preterm labour. Conversely, in a post-hoc descriptive study, Iams, Johnson, and Parker (1994) found that symptoms were increased only in the 24 hours that preceded a diagnosis of preterm labour. Home uterine-activity monitoring has been evaluated as a tool to identify the onset of preterm labour in several experimental studies (Devoe & Ware, 2000; Dyson et al., 1998; Iams et al., 2002). Although home uterine activity monitoring was found to accurately record contractions, and increased frequency of contractions was significantly related to preterm birth, uterine activity monitoring had a low positive predictive value for early identification of preterm labour. This finding is possibly related to baseline differences in uterine activity between women.

Experimental research has failed to confirm that any one marker can identify preterm labour early enough for current medical treatment to be effective in reducing the preterm birth rate (Lockwood, 2002). Randomized controlled trials evaluating the efficacy of fetal fibronectin (Appendix A) as a predictor of preterm birth have shown that the negative predictive value is high, playing a role in avoiding unnecessary treatment for women

experiencing preterm labour symptoms (Cunningham et al., 2001; Lockwood). However, false positive fibronectin tests are common because other factors, such as infection, bleeding, and cervical manipulation can also cause fibronectin to be released (Cunningham et al.). From his review of the literature, Lockwood estimated the positive predictive value for preterm labour to be 30 to 35 percent. Cervical length assessed by transvaginal ultrasonography (Appendix A) was found to be the most sensitive and consistent predictor of preterm birth prior to 35 weeks gestation compared to home uterine activity monitoring (Appendix A) or fetal fibronectin (Iams et al., 2002). However, cervical length was found to have less than 40 percent positive predictive value for preterm birth in the population studied.

Iams (2003) offered a diagnostic algorithm for preterm labour, from Ohio State University, that acknowledges the low positive predictive value of available tests for preterm birth and the high false positive prediction of preterm birth based on contractions and cervical change alone. In this protocol, negative fetal fibronectin and transvaginal ultrasound measurements of the cervix are used to exclude a diagnosis of preterm labour and avoid unnecessary tocolytic medication, steroid administration, and antibiotics for women with symptoms of preterm labour. The algorithm is not directed toward women with positive test results because there is an absence of evidence on which to base management for these women. Iams estimated from the preterm labour literature that 97 to 99 percent of women with preterm labour symptoms, intact membranes, and cervical dilation less than three centimetres, will not progress to preterm birth before 34 to 35 weeks if they have a cervical length exceeding 30 millimetres on transvaginal ultrasound assessment or in 14 days when a fetal fibronectin test is negative. The problem related to how women should identify and

know when to seek help for subsequent episodes of preterm labour remains beyond the scope of the diagnostic algorithm.

In a descriptive correlational study, 320 pregnant women between 20 and 32 weeks gestation were surveyed to determine if they would recognize a description of preterm labour symptoms and if they knew what action to take if they experienced symptoms (Freston et al., 1997). Although obvious preterm labour symptoms prompted women to choose appropriate action, up to one third did not recognize subtle symptoms of preterm labour and would have delayed seeking help.

Only one study has prospectively evaluated a preterm birth prevention program that provided symptom education to women at risk for preterm labour prior to the onset of symptoms (Collaborative group on preterm birth prevention, 1993). No benefit from the preterm birth prevention intervention was found when averaged over the five sites involved in the study; however, results between the five centres differed significantly. A possible explanation for these inconsistent results is that the investigators used traditional preterm labour criteria for admission to hospital. If women had presented themselves at a stage of preterm labour when measurable changes did not meet the study criteria for hospitalization, the advice given about when to return to hospital may have varied between centres.

Considering the uncertainty surrounding our current ability to accurately diagnose preterm labour, medication and bed rest is commonly prescribed for women who experience preterm labour symptoms, with or without cervical changes. Antepartum care at home programs have been implemented across Canada for women who are on bed rest and meet specific preterm labour symptom criteria. These programs provide nursing support and

education surrounding identification of worsening symptoms and guidelines of when to seek help.

### ***Antepartum Care at Home Programs***

Quasi-experimental program evaluations have demonstrated that antepartum home care is a safe and efficient alternative to hospitalization for select complications of pregnancy, including preterm labour (Harrison et al., 2001; Heaman et al., 1995; Janssen, 1997; Salvador et al., 2003). One randomized controlled trial was conducted to quantitatively compare gestational age at birth and birth weight for newborns whose mothers received antepartum care at home for preterm labour compared to those whose mothers received in-hospital care for preterm labour (Goulet et al., 2001). No significant differences were found between the two groups indicating that constant surveillance in hospital by health care providers had no advantages over relying on women on the home care program to know when to return to hospital. There has been no qualitative research conducted to explore how women on antepartum care at home programs identify a subsequent episode of preterm labour. However, several nurse researchers in the United States have investigated this phenomenon as it relates to a first episode of preterm labour.

### ***Qualitative Research Related to Identification of Preterm Labour***

There have been three qualitative studies exploring the experiences of women in identifying and acting on a first episode of preterm labour. Patterson et al. (1992) developed a grounded theory explaining how women come to know that they are in preterm labour, and what they do with that knowledge. A core theme of self-diagnostic confusion, resulting from ambiguous symptoms, absence of meaningful labels for symptoms, and misattribution of symptoms to expected discomforts of pregnancy, characterized the uncertainty women

experienced in the process of identifying preterm labour. Women tried to make sense of their symptoms by comparing them to more familiar experiences, gathering data to validate and clarify impressions about what the symptoms meant, and seeking information from various sources, such as prenatal literature and lay consultants. Women then went through a process of self-treating, ignoring, positive thinking, and waiting, before they sought assistance from a health care professional.

Mackey and Coster-Schulz (1992) used a qualitative approach to describe the process of becoming a preterm labour patient and living with a diagnosis of preterm labour. Later they extended their research to learn how women describe, interpret, and manage preterm labour in a “balancing act” (Coster-Schulz & Mackey, 1998, p. 335). The investigators identified a “personal knowing” (p. 341) that something was wrong, but women did not seek help from a professional until the usual symptoms that they had been experiencing became more intense. Why do women doubt their inner knowledge that something is not right? What factors prevent women from seeking help from a health care provider until all other avenues of help have been exhausted?

Building on these studies, Weiss et al. (2002) conducted research using grounded theory method to explore the uncertainty experienced by women with the onset of preterm labour symptoms. Mishel’s (1988) theory of Uncertainty in Illness was used as a theoretical framework for this qualitative study. An existing framework was used because the phenomenon had been investigated previously and it enabled greater potential to expand on earlier conceptualizations and challenge findings from prior research. Weiss et al. found that data collected from study participants reflected a process of “resolving the uncertainty of preterm labour symptoms,” and their findings supported those of Patterson et al. Preterm

labour had not been within the consciousness of the pregnant women in their study and this resulted in delays in help-seeking when they attributed symptoms to nonthreatening causes. These researchers recommended improved education that would enable pregnant women and health care providers to recognize and interpret subtle signs of the onset of preterm labour.

### ***Orienting Definitions of Terms***

***Antepartum Care at Home Program:*** A program that replaces hospital care for women with specific complications of pregnancy, including preterm labour. Women on antepartum care at home programs are taught self-assessment skills and signs of a worsening condition that should prompt them to seek help. There are ten antepartum care at home programs across Canada, three of which are located in British Columbia; one based at BC Women's Hospital, a second in the Fraser South area of the Fraser Health Authority, and a third, that started in September 2003, in the Fraser North area of the Fraser Health Authority. The goal of the British Columbian programs is to enable women with select complications of pregnancy to remain at home with their families as a safe, cost effective alternative to hospital care.

***Preterm labour:*** A textbook definition requiring both cervical changes and increased frequency of uterine contractions prior to 37 weeks gestation was not used for this study. Such a definition would have limited preterm labour to objectively measurable criteria that may have invalidated pregnant women's experiences of the onset of preterm labour. Since the sample was purposively selected from women who were diagnosed with preterm labour and had received antepartum care at home, the following antepartum care at home admission criteria were used to define preterm labour for this study (British Columbia Women's Hospital, 1995):



- Gestational age of 20<sup>0</sup> – 34<sup>0</sup> weeks
- Increased uterine activity (up to 6 contractions/hour) with or without cervical changes  
(≤ 3 centimetres dilation)
- Silent cervical dilation/effacement/beaking of membranes
- Post-operative cervical cerclage

***Preterm birth:*** Birth at less than 37 completed weeks gestation (Health Canada, 2003)

### ***Assumptions***

The following assumptions underlie the study:

- Women on the Antepartum Care at Home Program learn how to carry out self-assessment protocols for preterm labour.
- Women who have been given the diagnosis of preterm labour by a physician, and have been admitted to an antepartum care at home program, have experienced an episode of preterm labour.
- Labour can start and stop.
- Women will be able to recall and articulate their experience of identifying labour.
- Recognition of participants' differences will facilitate an explanation of factors that may affect how women who have received antepartum care at home decide when they are in labour and whether or not to seek help.

### ***Significance***

The results of this study will offer insight to health care professionals related to the emotional needs of women who experience subsequent episodes of preterm labour symptoms after they have received antepartum care at home. Additionally, a greater understanding of the factors that influence these women in deciding to seek help or delay help-seeking can

guide antepartum care at home program nurses in Canada to provide effective education for early identification of preterm labour and a timely return to hospital. When women in preterm labour return to hospital in time to receive antenatal steroids, antibiotics for group B haemolytic streptococcus prophylaxis, and transfer to a facility with the appropriate level of neonatal care, neonatal outcomes improve (Iams, 2003). Therefore, because this study provides knowledge that will help to determine the most appropriate emotional support and education for women experiencing recurrent preterm labour symptoms, it has the potential to improve neonatal outcomes.

### *Limitations*

The nature of qualitative research poses several limitations. Small sample size and purposive sampling procedures, as in this study, do not allow generalizations to be applied to larger populations. The home care programs across Canada are slightly different from each other, as is the obstetrical care received by women experiencing preterm labour in different provinces. The results of this study are, therefore, limited to broadening an understanding of the experiences of women with recurrent preterm labour symptoms who have received antepartum care at home in British Columbia.

Since one researcher conducted all interviews, there is potential for bias related to the types of questions chosen, the nature of the researcher's responses, and analysis of the data. It should also be noted that prior research related to preterm labour symptom recognition and help-seeking behaviour was conducted in the United States, whereas this study took place in Canada. Interpretation of results should be made with consideration of the different health care systems and freedom from financial burden when seeking help from health care providers in Canada. Additionally, the researcher could communicate only in English.

Despite a multicultural setting with access to women from many ethnic groups, ethnic variation in the sample was limited due to language barriers.

### *Summary*

Preterm labour is a significant problem in North America. Although interventions to stop preterm labour have yet to be discovered, if it is detected early, progress of labour can be delayed so that interventions can be implemented to improve neonatal outcomes. This study has been undertaken to describe the decision-making process in identifying a subsequent episode of preterm labour by women who have received antepartum care at home and to understand the factors that influence how they respond to their episode. It is hoped that health care professionals will use research findings to provide supportive care and appropriate education to women who have received antepartum care at home and experience recurrent episodes of preterm labour. Current knowledge was reviewed from the literature with respect to the complexities of detection and diagnosis of preterm labour, and the nature of programs geared to preterm labour symptom recognition. Concepts that are used in the research report were operationally defined and assumptions underlying the study were outlined. Chapter One concluded with a summary of the significance of the study and acknowledgment of study limitations.

Chapter Two contains details of methods used in the study, including research design, sample selection, data collection and analysis, techniques to establish trustworthiness of findings, and ethical considerations. Findings from data analysis and a discussion of the findings as they relate to the literature will be presented in Chapter Three. In the final chapter implications for nursing practice, education, and research, will be integrated with conclusions.

## CHAPTER 2

### Methods

#### *Introduction*

Grounded theory method, a qualitative study design, was chosen to explore the complex question of how women who have received antepartum care at home for preterm labour decide if they are experiencing a subsequent episode of labour, and what factors influence their response to that decision. Grounded theory method is well suited to explore process related research questions and poorly understood phenomena (Morse & Field, 1995). Research design, sampling procedures and data collection will be described, followed by an account of analytic procedures. Measures taken to support rigour are presented throughout data collection and analysis and are summarized in a later section. Chapter two concludes with ethical considerations salient to the protection of those who volunteered to participate in the study.

#### *Research Design*

The goal of qualitative research is to explore unknown phenomena (Morse & Field, 1995). In contrast to quantitative research where hypothesis verification requires a preconceived theoretical framework, generation of theory necessitates the qualitative researcher maintain an open mind to events as they occur in the substantive field. This allows significant categories to be constructed using the data to develop theory that is grounded in the experiences of study participants (Glaser & Strauss, 1967). Therefore, a detailed literature review, that may have developed a rigid conceptual framework and biased the researcher, was not undertaken. Instead, an open mind was adopted to enable patterns, relationships, and variables comprising the decision-making process involved in the

identification of labour to be described from the perspective of study participants. The study commenced hypothesis-free, without the intention of confirmation, but with the goal of discovery. As categories developed, emerging hypotheses were tested through a process of additional sampling, data collection and analysis.

Anslem Strauss and Barney Glaser founded grounded theory method. Gibson (2003) pointed out that the different philosophical backgrounds of the cofounders have contributed to public disagreement about the proper way to carry out the method. Glaser, studied at the Columbia School of Applied Social Research, where a positivist paradigm was dominant (Gibson), and Strauss was influenced by principles of symbolic interactionism at the University of Chicago (Strauss & Corbin, 1998). Melia (1997) provided a thorough account of their debate, and took the position that procedural emphasis by Strauss and Corbin is contrary to the original method described. Strauss and Corbin argued that the procedures they advocate were designed to assist beginning researchers who were grappling with uncertainty surrounding how to carry out data analysis. As the researcher for this study is a novice in grounded theory method, the approach chosen is based on Strauss's work, as described by Strauss and Corbin (1998) and informed by symbolic interactionism.

Questions where change and process are essential elements in understanding the phenomenon under investigation are best answered using grounded theory (Morse & Richards, 2002). Morse and Richards described how process is discovered through tracing action and interaction over time, which illuminates factors evident in the data that enable conditions to stay the same and factors that influence change. Data collection and analysis occur concurrently as the researcher makes comparisons that direct theoretical sampling to provide maximum variation in data. The goal is to build a theory through interplay of

inductive and deductive reasoning. The research process was driven by induction as hypotheses materialized from data that were grounded in the emic perspective of study participants. At the same time, the researcher has worked with women experiencing preterm labour for 24 years and her previous experiences lend theoretical sensitivity to properties within the data that could not be isolated from interpretations in deductive analysis.

### ***Sample Selection***

Initially, purposive sampling was used to select study participants. In contrast with the goal of probability sampling and random assignment to control subject variables in quantitative research, the goal of purposive sampling is to select informants for their ability to easily articulate their experiences and provide a clear description of the phenomenon under investigation (Strauss & Corbin, 1998). Eligibility criteria were determined at the onset of the study with a plan for theoretical sampling as the study progressed.

### ***Eligibility Criteria***

General eligibility criteria were intended to select a focal group of women who had experienced antepartum care at home and would be able to relate how they identified a subsequent episode of labour after having participated in the program. Women were initially selected if they:

- had been a patient on either the BC Women's or Fraser South antepartum care at home programs
- met antepartum care at home admission criteria for preterm labour
- were 19 years or older
- consented to participate on the study
- could speak and read English

As the study progressed, theoretical sampling, an integral element of grounded theory (Strauss & Corbin, 1998), was used to select participants who contributed to the developing theory. Negative cases, that maximized differences for theoretical comparisons, were chosen to provide evidence to test hypotheses about relationships among categories. Recruitment was slow at one centre; therefore, the researcher increased contact and gave encouragement to the antepartum home care nurses to increase participation. Participation from both locations was important to explore similarities and differences in participant experiences related to institutional norms of the two hospitals.

### ***Sample Size***

Qualitative research approaches do not endeavour to generalize findings to a larger population. The goal is to recruit a sufficient number of participants to grasp the influence of various factors that effect the phenomenon, while limiting numbers to ensure a deep understanding of the experiences expressed by study participants (Sandelowski, 1995).

Sample size was determined to be adequate when data saturation occurred, that is, when data became repetitious so that no further development of the categories was possible. Twenty-two eligible women prospectively consented to participate on the study and study identification numbers were assigned at the time of consent. Twelve women were interviewed to fulfill the theoretical needs of this inquiry.

### ***Recruitment***

The antepartum care at home program nurses from BC Women's Hospital and the Fraser South programs distributed information letters (Appendix B) to eligible clients during routine home visits. The information letter included consent for the investigator to contact the potential study participant by telephone to further explain the study and to invite her to

participate. The investigator is not involved with direct patient care so women were unlikely to have experienced a feeling of coercion. If a woman expressed interest in participating in the study, a meeting at her convenience was arranged to obtain written consent (see Appendix C).

### ***Setting***

Data were collected in a setting mutually agreeable to the study participants and the researcher. Interviews usually occurred in participants' homes. Three participants were interviewed in a private area in hospital.

### ***Data Collection***

Several techniques were employed in data collection to permit comparisons and corrections of interpretations as necessary, thereby contributing to the validation of data. The investigator conducted interviews, wrote field notes, and collected self-assessment data from informants' self-kept recording charts. These techniques are typically used in the grounded theory method because they are not based on any preconceived theoretical notion of the phenomenon under investigation. Participants were free to provide data that were most meaningful to them and, therefore, most significant in furthering an understanding of identifying preterm labour within the context of having previously received antepartum care at home.

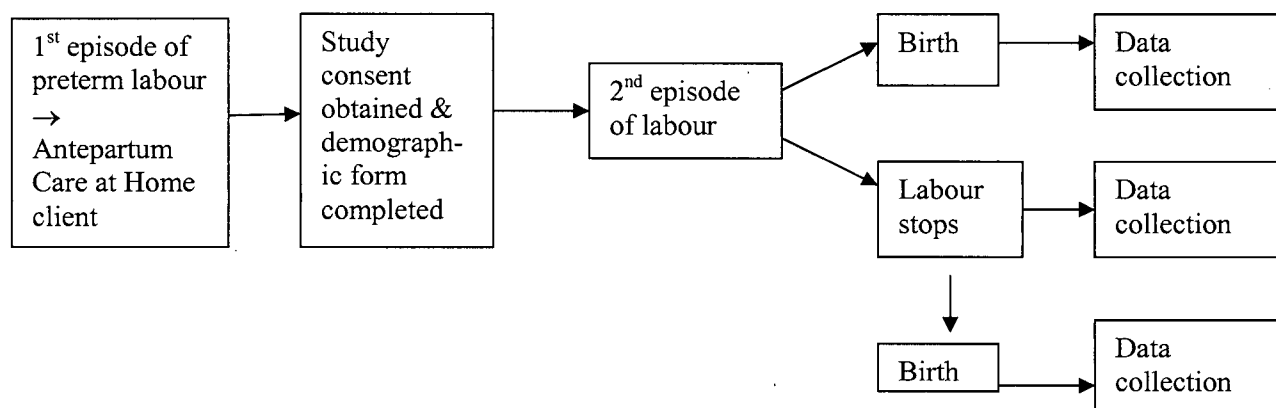
### ***Interviews***

Women who had been cared for on an antepartum care at home program were interviewed one or two times for 20 minutes to one hour after they had experienced a subsequent episode of labour. Interviews were audiotaped and transcribed verbatim. The interviews took place at various points of time in a woman's pregnancy depending on when



the woman experienced another episode of preterm labour. Some women were interviewed only once if the next episode of labour led to the birth of the baby. Figure 1 illustrates the time sequence in which women gave consent and participated in the study. Verbal consent was obtained for the researcher to make further contact for clarification of data and to verify theoretical impressions.

**Figure 1.** Diagram depicting the points at which data collection occurred



As described by Charmaz (2002), the grounded theory method requires focused interviews that begin with in-depth, open-ended questions, and become more structured as theoretical needs of the study necessitate exploration of specific concepts in greater detail. Initial interviews were semi-structured in an attempt to hear participants' stories and grasp an understanding of individual experience. The main focus for the first interviews was the woman's experience prior to her most recent episode of labour. The researcher opened the interview by asking the informant to explain how she decided she needed to go to the hospital. An interview guide of questions and probes was used to help the participants reflect about their experiences and to explore the phenomenon in depth (Appendix D). Direction for more structured questions became evident as analysis of interview data progressed.

### ***Field Notes***

To supplement data collected from interviews, the physical setting and non-verbal communication were recorded in field notes immediately following the interviews.

Significant contextual and behavioural elements contribute to verbal data by recreating the milieu in which the interview took place (Morse & Field, 1995). Field note jottings also included the general story line articulated by informants, key words or phrases that were used to describe their experiences of recognizing that they were in labour, as well as the researcher's first impressions and questions that arose from the interview. Content of telephone communication initiated by three participants was also recorded in field notes, adding to the depth and understanding of the emotional aspects associated with several categories.

### ***Demographic and Pregnancy Related Characteristics***

A short structured survey was designed by the researcher to collect demographic and pregnancy related data (Appendix E). Study participants were invited to complete the survey at the time consent was obtained. These data were used to describe basic characteristics of study participants and is summarized in Chapter Three.

### ***Patient Recording Chart***

Women being cared for on the antepartum care at home programs record their self-assessments regarding preterm labour symptoms and rest hours. These data represent a record of the concrete assessments women have been taught to document. If the woman remained on the program at the time of interview, the self-assessment record was included in data collection and analysis. Once discharged from antepartum care at home at 34 weeks gestation, none of the study participants continued recording signs and symptoms of preterm

labour. However, two participants who had not reached 37 weeks gestation when they experienced a subsequent episode of labour, kept a record of contraction frequency, and they provided this information during interviews.

### ***Data Analysis***

Sampling, data collection and data analysis took place within a framework of theoretical questioning and constant comparative analysis to search for contrary cases and discover variations and patterns (Strauss & Corbin, 1998). For example, the concept “knowing something’s not right” was compared to “not knowing.” Comparisons such as these generated theoretical questions about the conditions under which a study participant might not identify preterm labour symptoms. As analytic synthesis progressed, a core category was developed that the researcher believes explains the process of how women who have received antepartum care at home decide if they are in labour and whether or not they seek health care assistance. Analysis included three levels of coding described below (Strauss & Corbin).

#### ***Open Coding***

Open coding was used to reduce the data by examining the interview text and applying descriptive action labels to phrases that described what was happening in the data from the participants’ perspectives. Data were prepared for open coding by transcribing the interviews verbatim to a Microsoft Word document with line numbering; the margins were used to apply open coding labels. Labelled phenomena were then compared to each other and those with similar properties were grouped under a common category that was assigned a name to capture central conceptual meaning expressed by participants. Transcripts were colour coded to ensure that the origin of transcript excerpts could be identified and re-

examined later as necessary. Computer folders were created for each category, and colour-coded excerpts of data that illustrated participants' experiences relating to the particular concept were copied and pasted into the appropriate folder. Folder contents containing excerpts were occasionally printed for ease of handling, sorting and contemplation.

Properties and dimensions described in open coding included variation in the data not necessarily experienced by all women on the study, and some of the open coding data were included in more than one category folder. For example, a participant who had no previous experience with preterm labour believed that most people would be sceptical about her experience because she believed it was uncommon. The data were labelled with the open code, "being unfamiliar with preterm labour." Another woman who had experienced spontaneous labour in a previous pregnancy referred to her prenatal education books when deciding if she should go to the hospital. The open code, "taking advice from prenatal books" was used to label these data. Both of these codes and the colour coded excerpts were placed in the same category folder under the conceptual label, "trying to make sense," and were also placed in other category folders that seemed relevant during initial coding.

### ***Axial Coding***

Axial coding is a process that reconstructs data to generate theoretical interpretation of participants' experiences. Related categories are linked to subcategories through a process of analysis of properties and dimensions to identify actions/interactions, conditions, and consequences associated with the subcategories. Through axial coding, categories became abstractions that represented recurring concepts found in data obtained from all women in the study. Writing and rewriting memos that described the properties, dimensions, and variations

developed for each category and subcategory was essential in determining linkages between the categories and factors that influenced change.

Continuing the previous example with the category folder, “trying to make sense,” in axial coding, data were examined more closely for similarities and differences between participant experiences sorted into this category. Moreover, there was an examination of how those data related to participant experiences in other category folders. Concepts in “trying to make sense” were found to intersect with concepts in “expecting something different.” When participants held expectations that professionals would diagnose active labour and these expectations were not met, they searched for more information to explain their experiences. The category label was renamed, “wanting more information” to reflect participants’ dissatisfaction with explanations from professionals that were inadequate in explaining their experiences.

### ***Selective Coding***

Selective coding is a process of refining all categories and connecting them to a core category. The purpose of integrating all of the categories to arrive at the core category was to capture, in a few words, the process by which women who had received antepartum care at home identified subsequent episodes of labour and how they responded to those episodes. As the study progressed, theoretical sampling was used to saturate underdeveloped categories. For example, the concept “relying on professional knowledge” lacked elements to explain what happened to influence participants to rely on professional knowledge over body knowledge. Developing this concept by incorporating the perspectives of additional study participants was essential in understanding the interrelationships between categories and their connection to the core category.

The core category has explanatory power to support the main categories derived from the data as well as variation within subcategories. Once a sense of the core category was developing, various words were tried until the ones that seemed to capture the essence of the experience were selected. For example, the concept “adaptation” was compared to the concept “reconciliation” to describe the core process. The researcher decided which concept was most appropriate to explain the process by comparing analysis of raw data to personal experiences and findings from the literature. Member checks were used to determine if categories and the core category were recognizable to participants.

### ***Additional Analytic Procedures***

As well as coding, additional analytic procedures were used to aid in theory development. These included memo writing, document analysis, and diagramming.

***Memo writing.*** A notebook with five sections was used to keep memos. The first section contained reminder notes, appointments, contact information for study participants, and communication with an expert panel. Immediately following interviews, field notes were recorded in the second section. The third section was used to document theoretical memos that included the researcher’s ideas, insights, and thoughts about categories as data were analyzed. This section filled up quickly, and the computer was found to be a more efficient means of recording, developing, and examining relationships between categories and subcategories. As categories were developed and compared to each other, they were refined through further memo writing to clarify properties, dimensions, and variations. To ensure that properties and dimensions of categories earned their way into the developing theory, excerpts from transcriptions, that were colour-coded for each participant and demonstrated consistent support for the conceptualizations, were inserted into the memos. Not all of these

data were used in the final analytic theory, however this process increased the researcher's confidence that the theory was indeed grounded in the participants' experiences.

Memos about the researcher's interpretations and abstract thoughts were written in the fourth section. These memos contained information found in the literature that seemed to be linked to the developing theory. Frequency of memo writing in this section increased as the study progressed and the researcher returned to the literature to compare previous research findings to the developing theory. The investigator's personal biases were noted at the end of this section.

In the final section of the notebook, procedural memos were written to record the research process during data collection and analysis. Justification for theoretical sampling was also included. The back pages of the fifth section were used to record questions about the data.

***Document analysis.*** Participants' self-assessment records were examined to search for information related to the decision making process in identifying onset of labour. These records were collected from those participants who experienced an episode of preterm labour while continuing on one of the antepartum care at home programs.

***Diagramming.*** Diagrams were sketched into the memo notebook to visually represent relationships between concepts. They were changed regularly as data collection and analysis influenced the evolution of theory. Diagrams were useful in explaining the developing theory to participants to obtain their feedback.

### ***Techniques to Establish Trustworthiness***

In the original work on grounded theory method, Glaser and Strauss (1967) differentiated between measures of verification in quantitative research and more appropriate

standards of rigour for qualitative research, related to credibility, fittingness, understanding, and generality. Since then, numerous qualitative researchers have debated the most suitable canons of rigour that should be applied to particular study methods (Chiovitti & Piran, 2003). Sandelowski (1993) offers a perspective exposing the difficulties inherent in searching for validity and reliability in qualitative work. She suggests that even the most admirable attempts to ensure trustworthiness, with member checks and other validation strategies, are susceptible to flaws. Sandelowski emphasizes the importance of preserving the art of qualitative research so that the goal of understanding phenomena is not lost in rigid rules.

Nevertheless, attempts must be made to demonstrate that theory is not fabricated from the researcher's imagination and that it fits into the "conceptual world" that is understood from related literature (Morse & Field, 1995, p.143). Lincoln and Guba (1985) provide criteria for naturalistic techniques that are suitable in establishing trustworthiness when theory is constructed. Throughout this report, measures to support the rigour of the findings were included in the description of methods. They will be further summarized below, using the four aspects of trustworthiness described by Lincoln and Guba; credibility, transferability, dependability, and confirmability.

### ***Credibility***

Credibility represents the degree to which study findings demonstrate the experience of the study participants and ring true with others who are familiar with the phenomenon (Beck, 1993). In this study, credibility was enhanced by using multiple sources of data collection. Rather than solely relying on interviews, field notes and self-assessment recording charts were also analyzed. As the study advanced, the researcher selected negative cases to develop properties within categories, to investigate the limits of developing categories, and to



eliminate the conditions that did not fit the developing theory. For example, theoretical sampling included a participant who did not decide that she was in labour until time for transport to hospital was no longer possible, and another participant was selected who experienced no symptoms of preterm labour, yet was hospitalized for cervical changes.

To ensure that the informants were free to express the aspects of their experiences that they believed to be most significant, the researcher followed the lead of study participants during interviews. For example, initial questions were broad and open-ended. Participant responses helped guide succeeding inquiry to decide whether data were consistent with most informants or if there were unique situations that influenced the process and required further attention to trace their relationship within categories. Additionally, diagrams were used to give participants a visual schema of the developing theory during member checks. Participants were encouraged to critique the researcher's interpretation of what they had articulated, as well as add properties that the researcher had not grasped. Informants' language was used as open codes and to label categories when appropriate. All conceptual categories were supported with excerpts from transcriptions or other documented evidence.

### ***Transferability***

Fittingness is the standard that relates to transferability, or whether the research findings are applicable in other contexts (Beck, 1993). Eligibility criteria for inclusion in this study were simple and directed to the purpose of exploring the decision making process of labour identification in the context of previously receiving antepartum care at home for preterm labour. These criteria, along with participant characteristics collected at the time of consent, provide a description of the women who participated in the study.

As theoretical concepts were synthesized, the literature was re-visited as a comparative template, and memos were written as described above. For this study there is sparse work to rely on as a check for fittingness because antepartum care at home programs are unique to Canada. There are only four previous American qualitative studies that explore a similar phenomenon as it occurs under very different conditions.

### ***Dependability and Confirmability***

Auditability refers to the ease at which another investigator is able to track the decisions made by the researcher (Beck, 1993). Lincoln and Guba (1985) suggested that a process audit should be used to examine dependability, and a product audit should be carried out concurrently to establish confirmability. For this study, an expert panel of three scholars followed the audit trail to verify dependability and confirmability of the theory. The researcher used the five-section notebook described above in "Memo Writing" and dated computer memos to facilitate this process. The comments in the notebook reflected the researcher's decisions about how to pursue data and thinking about incorporating data in category development.

### ***Ethical Considerations***

A study proposal was submitted to the University of British Columbia Behavioural Research Ethics Board and to the Research Review Boards of Surrey Memorial Hospital and Children's and Women's of British Columbia. Potential participants received an information letter distributed by the antepartum home care nurses describing the study and inviting them to give consent for telephone contact by the researcher (Appendix B). If they declined, recruitment was not pursued. Written consent (Appendix C) from study participants was obtained following a verbal explanation of the study purpose, procedures, and participants'

involvement and time commitment. Each participant received a signed copy of the consent form. Women were assured that participation in the study was not required. If a woman chose not to participate in the study, she was reassured that it would not influence the care she received. Potential participants were encouraged to ask questions about the study and the research procedures. In a case where a woman had given birth prematurely, the researcher was aware of the sensitive nature of the situation and delayed the meeting until the woman expressed her desire to be interviewed.

Utmost effort to ensure confidentiality was undertaken. Interviews were audiotaped in a private location in-hospital or in a room of the participant's choice in her home. Interviews were transcribed verbatim and there was no information identifying the participant on the transcription. The tapes were stored in a locked filing cabinet and will remain in such storage for five years after completion of the study and then they will be destroyed. Study numbers were assigned to each transcription and the signed consent forms were kept in a separate locked cabinet. Information disclosed to the researcher was not attributed to particular participants.

It is not known if participants will benefit directly from this study, although many women seemed to find the opportunity to recount some of their labour experience to an attentive listener a rewarding experience. Each participant was given a book for their baby as a symbol of appreciation for their time and contribution to the study. The main contribution of this study will be to provide a substantive theory about how women who have received antepartum care at home decide when they are in labour. This knowledge has potential to guide nurses in providing appropriate emotional support and education to other women who

experience recurrent preterm labour symptoms. Participants will have access to the results if they wish.

### *Summary*

Grounded theory method was chosen as the most appropriate research approach to answer the research questions. In this chapter, the research design, sampling method, and data collection and analysis procedures were explained. A discussion of techniques to establish trustworthiness followed and included measures taken to promote credibility, transferability, dependability, and confirmability of the findings. Lastly, actions taken in response to ethical considerations were outlined. In Chapter Three, findings from data analysis will be summarized and integrated with existing knowledge found in the literature.

## CHAPTER 3

### Findings and Discussion

#### *Introduction*

Research findings from interviews with twelve women who had received antepartum care at home for preterm labour prior to 34 weeks gestational age are presented in this chapter. Demographic and pregnancy related characteristics of the twelve participants are described, followed by an explanation of the core category which portrays the overall decision-making process of labour identification and action in response to identifying recurrent labour episodes. A diagrammatic representation of the process illustrates relationships between categories that shaped how these women made their decisions. Factors that influenced how study participants decided if they were in labour and whether or not they sought help are described and supported with excerpts from participant interviews. Throughout the chapter, concepts in the substantive theory are compared with existing literature as they are discussed.

#### *Demographics and Pregnancy Related Characteristics*

Of the twelve study participants, nine were recruited from Fraser South Antepartum Care at Home Program and three were recruited from BC Women's Hospital Antepartum Home Care Program. Seven study participants were interviewed after they had been discharged from antepartum care at home because their next episodes of labour occurred after discharge. When interviewed after the birth of their babies, five of these women reported that they had experienced a warning sign of preterm labour, such as possible ruptured membranes, contractions, or loss of show, for which they had sought help. They had not telephoned the researcher for an interview because they had been convinced that their

**Table 1.** Demographic and Pregnancy Related Characteristics (N = 12)

Program	
BC Women's Hospital	3
Fraser South	9
Age	23 – 35 years (mean: 30 years)
Parity 0	4
History of preterm birth	4 (1 neonatal death)
# of children living at home	6 - 1 child at home; 1 - 3 children at home
Employment status	
Employed	8
Unemployed	2
Student	2
Partner employment status	
Employed	10
Student	2
Education completed	
Grade 12	4
Diploma or certificate	4
University degree	4
Self-identified ethnicity	
Canadian	4 (1 First Nations)
Great Britain	3 (1 visiting from England)
Other	German, American, Sri Lankan, Chinese, Filipino
Gestational age at birth	
Term	7
Preterm	5 (1 - 30 weeks; 2 - 35 weeks; 2 – 36 weeks)
Medical intervention during childbirth (1 home birth at 35 weeks – no intervention)	
Elective cesarean section at term	2 (1 – twins; 1 – repeat)
Cesarean section for preterm breech	1 (36 weeks)
Oxytocin augmentation	6 (1 cesarean section for failure to progress)
Artificial rupture of membranes	2 (labour stopped when > 4cm dilated)

assessment was inaccurate and did not qualify as an episode of preterm labour. Of the five study participants who experienced their next episodes of labour while continuing to receive antepartum care at home, three were interviewed only once; one returned to her remote rural town at 35 weeks gestation, one was hospitalized because there were significant cervical changes found on ultrasound scanning, and the third woman's episode of labour progressed to childbirth. The remaining two participants experienced recurrent episodes of preterm labour and were interviewed twice.

Participants' ages ranged from 23 to 35 years, with a mean age of 30 years. All participants were referred with the diagnosis of preterm labour except one woman who also had preterm rupture of the membranes. Of the eight multiparous participants, four had a history of preterm birth in a previous pregnancy. Five women were living with a child age two or three years, one with a five year old, one with three children ages nine, four, and one, and one participant had suffered a neonatal death at 21 weeks. All of the women lived with a partner; ten partners worked outside of the home and two were students. Eight participants worked outside of the home, two were students, and two were homemakers. Four participants identified themselves as only Canadian, one of whom was First Nations. Other ethnic origins included three women from Great Britain (one visiting Canada from England), one German, one Chinese, one American, one Sri Lankan, and one Filipino. Four participants had completed grade 12, four had completed a post-secondary certificate or diploma program, and four had completed a university degree.

Gestational age at birth in the current pregnancy ranged from 30 to 39 weeks. Among the five participants who gave birth preterm, one infant was 30 weeks, two infants were 35 weeks, and two infants were 36 weeks. There were three elective caesarean sections and nine

vaginal births. Medical intervention, which consisted of augmentation or induction of labour with oxytocin, artificial rupture of the membranes, or caesarean section, was undertaken for eleven of the twelve women. In ten of these cases, the women had not delivered in less than 24 hours following spontaneous rupture of membranes, or labour was not progressing.

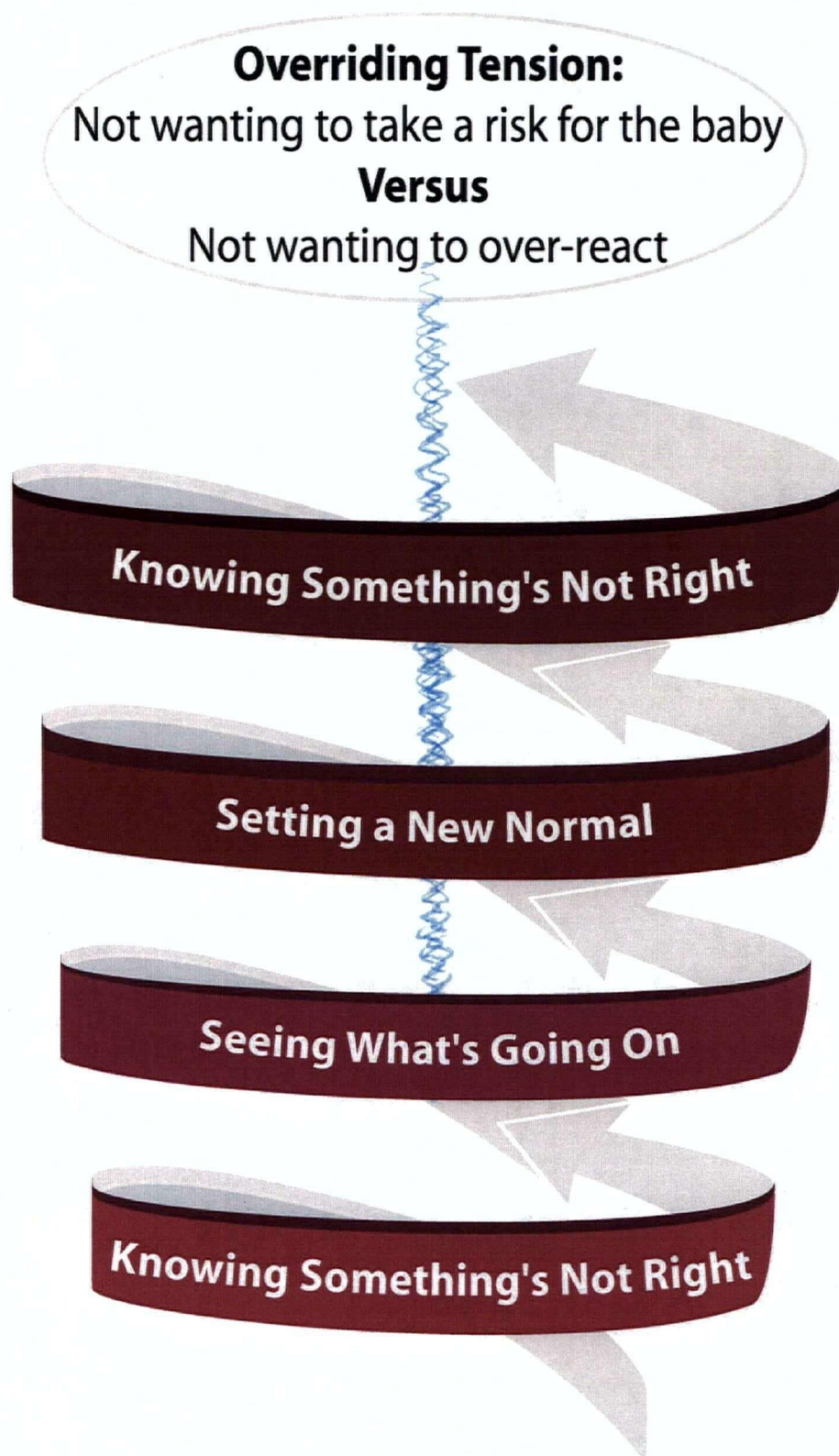
Demographic and pregnancy related characteristics are summarized in Table 1.

### ***Reconciling Body Knowledge and Professional Knowledge***

Women in this study decided if recurrent episodes of preterm labour symptoms represented “true labour” and warranted professional attention through a complex and dynamic psychosocial process of “reconciling body knowledge and professional knowledge.” After receiving antepartum care at home, the first episode of symptoms for which study participants sought help was appraised and acted on uniquely when compared to how they responded to all future episodes of symptoms. Study participants decided that their first episode of symptoms represented labour and required professional assessment because they had confidence in their body knowledge and felt certain that following antepartum help-seeking guidelines was the best action. Many of these women were told by health care professionals that they were not in labour. As a consequence, decision-making about seeking help for future episodes of symptoms was influenced by an overriding tension between not wanting to take a risk for the baby and not wanting to over-react. The diagram in Figure 2 illustrates how this tension permeated all stages of the potentially repetitive process following the first occasion where study participants felt dissonance between what their bodies were telling them (body knowledge) and what their health care providers were telling them (professional knowledge).



*Figure 2.* Reconciling body knowledge and professional knowledge



“Body knowledge” refers to the study participants’ subjective interpretations of interior bodily perceptions that may or may not have been visible or measurable at the time of hospital assessment. Women in the study experienced their body knowledge privately, using their senses and intuition. Their body knowledge was sharpened when they were taught by antepartum care at home nurses to consciously pay attention to their internal bodily perceptions while carrying out self-assessments.

“Professional knowledge” refers to health care professionals’ objective, rational findings from external physical assessments of patients and interpretations of investigation results. Professional knowledge refers to the scientifically verified knowledge that outside observers equated with reality. Doctors and nurses in the hospital used professional knowledge to assess and communicate the seriousness or insignificance of preterm labour symptoms to study participants both at the time of admission to antepartum care at home and on subsequent visits to hospital.

Reconciliation was the process by which study participants negotiated the disparity between the two types of knowledge. They could not comfortably ignore their body knowledge, of which they had become more aware, if it meant that their babies were potentially at risk. They did not have access from their homes to specialized professional knowledge to manage or understand their condition. Therefore, they attempted to find safe, common ground between the two ways of knowing about what was happening in their bodies. This was an emotional process that was intensified by an overriding tension between not wanting to take a risk for the baby and not wanting to over-react. One study participant explained how reconciliation was her only option to manage the incongruence between her body knowledge and professional knowledge.

And, you know, trying to convince yourself, more than anyone else, that you're not just a wuss and you're not crazy and, so what are the other options? Right? Because what are the other options? And the other options are exactly what you said, which is reconciliation...where's the common ground? (12)

Women participating in the study described, "knowing something's not right," as they used their body knowledge to recognize a change in symptoms from their baseline symptoms. After receiving antepartum care at home, most women in the study were confident in their body knowledge and they followed antepartum help-seeking guidelines without hesitation when they returned to hospital on the next occasion that symptoms exceeded their baselines. They recounted specific details of the onset of preterm labour symptoms when "noticing a sudden change." Study participants recalled how a new symptom was different from their baselines of nonthreatening symptoms or how a symptom they had already experienced became more intense. These women did not seek help for symptoms that they had included in their baselines of normal. While "waiting to see if it stops," women in the study assessed themselves and referred to the antepartum care at home guidelines to decide when to return to the hospital. Some women used relaxation and self-management strategies that they had learned while receiving antepartum care at home until their symptoms subsided or became more intense and prompted them to seek help.

After returning to hospital to verify their body knowledge, women in the study attempted to decipher inferences about their condition made on the basis of assessment by professionals. They valued the concrete evidence that professional knowledge provided, but "seeing what's going on" involved a potentially humiliating experience for participants if their interpretations of symptom meaning did not coincide with professional interpretation of test results. Some women in the study experienced symptoms that corresponded to

measurable changes found on professional assessment, but when this was not the case, they described themselves caught in emotional turbulence.

Study participants sought help “expecting to be believed.” They stressed that they returned to the hospital only because they feared that their babies were at risk. Without visible proof of their experiences, study participants worried that they would be judged as hypochondriacs. They began to doubt the accuracy of their self-assessments and became frustrated with what they saw as the “defective” performance of their bodies. They searched for explanations to understand what they had experienced if it was not preterm labour. “Wanting more information,” they were not satisfied with normalizing terms used by professionals that they had previously used themselves when describing their baseline symptoms. Despite more information, most study participants were unable to find an explanation that fit their experiences.

In response to the incongruence between body knowledge and professional knowledge, study participants adapted their plan to seek help by “setting a new normal,” meaning they would respond to future symptoms at a new level that coincided with professional judgment. “Relying on professional knowledge,” women in the study redefined their new baselines of significant symptoms that would represent labour and be worthy of seeking help. Their “new normal” was set beyond the recommended antepartum care at home guidelines to seek help because they wanted to avoid the discomfort associated with appearing to “misread” their body cues. They described “wanting to get it over with” as they became overwhelmed and exhausted from the responsibility and anxiety related to making the correct decision about when they were in labour and when they should return to the hospital. These women saw birth as the only solution to their dilemma.

Despite the emotional fatigue experienced by study participants, some of them questioned the accuracy of professional knowledge when it was inconsistent with their body knowledge. Most study participants felt that “trusting your gut,” which meant listening to their body knowledge, took precedence over the risk of over-reacting. They rationalized that it was their “right” to seek help even if it turned out to be “nothing.” Women in the study believed that they would seek help again in a timely fashion because they would “know something’s not right.”

When these women were sent home from hospital believing that “nothing happened,” they began a new cycle of “reconciling body knowledge and professional knowledge” that was altered by an overriding tension between not wanting to take a risk for the baby and not wanting to over-react. Their next episodes of preterm labour symptoms were appraised with less confidence and with more anxiety related to uncertainty. After they had been publicly branded as “over-reacting,” study participants stopped using antepartum help-seeking guidelines to help them decide if they were in labour and when to seek help. They waited longer to see if it would stop or until their symptoms exceeded their “new normal.” They wanted to be sure that they were not over-reacting while, at the same time, they worried that they were waiting too long for the safety of their babies. Unable to “unlearn” their body knowledge, they became anxious while attempting to ignore their internal perceptions.

The experiences of study participants in, “reconciling body knowledge and professional knowledge” are portrayed in the following deeper description of the three stages: “knowing something’s not right,” “seeing what’s going on,” and “setting a new normal.” If the process of reconciling body knowledge and professional knowledge repeated, study participants experienced “knowing something’s not right” in a different way compared

to the first episode of preterm labour for which they sought help after receiving antepartum care at home. These differences are described as the process restarts.

### ***Knowing Something's Not Right***

Women in the study used their body knowledge at home to decide if their symptoms represented labour and whether or not they should seek professional help. There were two subprocesses involved in "knowing something's not right." "Noticing a sudden change" was concerned with study participants' appraisal of symptoms and how they decided that they were in labour. "Waiting to see if it stops" was concerned with how they made their decisions related to whether or not they should seek help. These processes were influenced by study participants' previous experiences with preterm labour in their present and past pregnancies and by the symptoms that they had included in their baselines of "normal."

"Knowing" their interior bodies characterized the decision-making process in deciding that labour symptoms differed from baseline symptoms and required professional assessment. When at home, study participants did not have access to professional knowledge; therefore, these women used their body knowledge to decide if they were in labour.

Antepartum care at home teaching attempts to increase self-awareness of preterm labour symptoms, promotes belief in self-efficacy to correctly appraise symptoms that require further professional assessment, and provides safe help-seeking guidelines (Surrey Memorial Hospital, 2002). Thus, the intention of antepartum care at home is to enhance women's body knowledge and increase the likelihood that they will seek help prior to an emergency situation. After receiving antepartum care at home teaching, study participants generally followed the antepartum care at home self-assessment protocols and carried out twice-daily focused self-assessments during which they became aware of their baselines of usual internal

and external bodily sensory perceptions. For example, when contractions were experienced on palpation during one-hour contraction counts, study participants were encouraged to take note of their unique internal sensory perceptions that coincided with the contractions.

Analysis of study participants' self-kept symptom records demonstrated that they carried out twice-daily self-assessments, consisting of contraction counts, fetal movement counts, and descriptions of vaginal discharge. Women in the study explained how they used their regular self-assessments to establish their baselines of nonproblematic or "normal" symptoms. Although most study participants did not note on their self-kept records how they felt while they experienced symptoms, their body knowledge of internal sensory perceptions was evident in their descriptions of how they recognized significant changes from their baselines. One woman described how she established her "normal" baseline and how she knew from the increased pain intensity experienced internally that she was in labour.

Because...well, at first your baseline is no tightenings, no contractions, right. And then if they change that to a normal setting of like, "Okay, I get 10 tightenings a day," then that's kind of your baseline, because you've checked with the doctor and the doctor tells you there's no change and it's still continuing. So that's how you set your normal...right. And then with the actual contractions, I...I knew right off the bat that that's what they were because they were so painful. So that's kind of...and I knew that that wasn't normal. It wasn't normal to have that much pain. (8)

On the next occasion of preterm labour symptoms after being admitted to antepartum care at home, study participants reported that they "want(ed) to take it seriously." They were certain that the changes from their usual baseline of symptoms represented an episode of preterm labour. Although they valued professional authorization of a trip to hospital, most of these women admitted that they would have insisted on hospital assessment regardless of the advice they were given.

I think I probably would have waited maybe another half-hour to an hour and then I think I would have called again and said, "I'm coming in now." I think it is one of those things...I don't think there's anything she really could have said that would have stopped me...I was out of my comfort zone in terms of just the concern for what this might be doing. (12)

Conversely, when a study participant had perceived no preterm labour symptoms and her cervix was found to have changed on routine ultrasound assessment, she had no reliable baseline to which symptom comparisons could be made. For this woman, admission to hospital was a welcome relief because she did not have knowledge of changes that were taking place in her body. She explained that it was "pretty scary because if you have symptoms you'll be very careful and when you don't know what's going on, it's pretty scary..." (19).

Women in the study looked to family and friends for practical help and emotional support, but did not consult them to help interpret the meaning of symptoms. These women were confident that their knowledge about preterm labour was superior to that of family and friends. Some participants voiced concern that if lay advice conflicted with "expert" advice, decision-making would have been more difficult.

...once people know then they start to worry and then that multiplies and all that kind of stuff. And it actually, I find, just makes a more tense situation as opposed to just kind of being able to focus and decide on what you think is the best thing is to do. It's always very well intentioned of course. It comes from all the right places but I just find sometimes it can be a bit much...So it's best if I don't have to deal with a whole bunch of "good advice" about what to do next, because I've obviously had advice from the experts...(12)

Other study participants avoided informing family and friends of their preterm labour experiences because they were overwhelmed with the volume of conversation that was



required to appease the frequent questions and worry. One participant explained that she conserved energy and reduced stress by being selective when she decided to publicize her episodes of preterm labour. She informed family members and friends from whom she needed help, and avoided the exhaustion of explaining her condition to others who did not need to know and did not understand the nature of preterm labour.

You talk to so many people, right? I have to take (daughter) to Grandma, right, and then, see...I think it will really help if people understand when to press release an episode. Because I used to work in marketing and I do press releases, right. You do not tell people before you are ready, what happened. Because if you tell people "I have an episode," people want...people are dying to hear that you're getting better, but you don't know. You're still going through up and downs. So the best way to deal with it is not to press release it. Just to tell people that you need help from. Like, okay, (daughter)...like I didn't tell my mom but I told (mother-in-law) because she takes care of (daughter). But if I tell my mom, and there are a lot of people like my mom, they would keep telling, "Okay, you call me when you know this"...give you so much work, so much more stress. (17)

Partners relied on study participants to make decisions about whether or not to seek help. They were supportive and assisted the study participants in practical ways to facilitate the trip to hospital, but they did not participate in symptom appraisal or decision-making. One partner was aware that his wife believed her preterm labour would progress to preterm birth at 30 weeks, yet he did not interfere when she agreed to go home from hospital because her cervix was found to be long and closed (13). Another participant explained that her partner left decision-making to her because he realized that he did not have access to the internal information that only she could interpret.

He's been really good about kind of letting me make the call. He just kind of said, "You know, it's your call." He said, "I don't have anyway to know what you're

feeling so if you think we should go, we'll throw the dog in the garage and we'll go, and if you don't, we can hang out here so..." (12)

Another woman realized that her husband was more concerned about her wellbeing than about the baby. Her decisions were based on concern for her baby rather than for herself.

Like I said, (husband's) worried about me and I'm worried about the baby. I know that I'll be fine cause my body's taking care of itself. I need to take care of (baby), but he's worried about me. (16)

Other researchers found that women in previous studies who experienced a first episode of preterm labour were confused and uncertain about the meaning of symptoms prior to seeking help (Patterson et al., 1992; Weiss et al., 2002). Women interviewed by Patterson et al. compared their symptoms to the experiences of pregnancy described by other women and to disease processes. For example, knowledge of familiar diagnoses, such as Braxton-Hicks contractions or a strained muscle, added to their "diagnostic confusion." They expected to find a regular contraction pattern or a visible sign of labour to validate their suspicion that they were in preterm labour.

In contrast to these studies, participants in the current study appraised their next episodes of preterm labour after receiving antepartum care at home with certainty. Rather than comparing their experiences to those of other women, participants in this study used body knowledge of their well-established baselines as a point of reference for comparison of symptoms and they carried out structured self-assessments as a means of gathering data to assess the significance of symptoms. Symptoms perceived beyond their baselines were immediately presumed to be indicators of another episode of preterm labour.

Women in previous studies turned to family and friends to help them resolve uncertainty and verify symptom meaning related to a first episode of preterm labour (Mackey & Coster-Schulz, 1992; Patterson et al., 1992; Weiss et al., 2002). Contrasting with these

findings, women in the current study made decisions independently about the onset of labour and consulted professionals when deciding whether or not to seek help. Corresponding to uncertainty in illness theory (Mishel, 1988), structure providers, such as the guidelines of when to seek help and self-assessment protocols provided by antepartum care at home, reduced uncertainty and prepared women in this study to use their body knowledge to appraise preterm labour symptoms.

### ***Noticing a Sudden Change***

Women in the study reported that they identified the onset of labour by comparing concerning symptoms to their individual baselines. Sensitivity to changes in their condition was influenced by experiences with preterm labour in a previous pregnancy and in the present pregnancy. Study participants recognized variances from their baseline symptoms that represented labour as a sudden change that demanded their immediate attention, yet their perception of change was contingent on what symptoms were included in their baselines.

Most study participants experienced ongoing preterm labour symptoms even when they were told that their cervixes were not dilating or effacing. Symptoms that were experienced in a previous episode of preterm labour that did not cause cervical changes, fell into their “normal” baselines. Those symptoms often recurred but were considered not to be problematic. Women in the study disregarded those symptoms unless they were carrying out routine focused self-assessments to record their findings on their self-kept recording charts. When these women noticed a sudden change from their baselines, they became more attentive and began to focus on what was happening in their bodies. One woman commented on her “surprise” from the sudden onset of more intense contractions to her usual

“tightenings” (2). And another woman recognized the addition of new preterm labour symptoms to her baseline “tightenings” and “pains.”

I get pains...like just...it's like a ring around your belly. Just like...pains on the sides and stuff...just tightening...really tight. I never have the pains on the sides usually, without...like with the small contractions, I never have the back pain or the bowel pressure, but it...it was different. (8)

Another participant who had often experienced more than eight contractions per hour described her lack of attention to baseline symptoms until she noticed a sudden change in contraction intensity.

...unless I'm doing my contraction count, I don't even pay attention to tightenings anymore...see it might start with tightenings. It might start with tightenings that I just completely disregard and then eventually get to pain...For me, when I become aware of it is either when I get that cramping or that first big woosh thing that then results in pain. (12)

Women in the study were able to estimate the time that a change from their baselines occurred. Rather than a vague or gradual onset, the time was rounded to the nearest hour or half hour. There were clear starting points, such as, “So at 3:00 on Monday my stomach started tightening up...” (16), or “It was around 3:00 in the afternoon...definitely. I remember thinking, ‘Oh, great! What am I going to do about dinner?’” (7). This was the case whether the sudden change was visible, like ruptured membranes or bleeding, or whether it was a change in internal perception associated with contractions.

Study participants, who had given birth prematurely or had experienced preterm labour with cervical changes in a previous pregnancy, were more sensitive to the onset of symptoms. This was especially true if they had not identified a previous labour until an advanced stage. During the present pregnancy, preterm labour symptoms often triggered

these women to recall symptoms from their previous preterm labour. One woman recalled the “shooting pains” she had experienced with contractions when she gave birth at 26 weeks.

And I didn't...that feeling, the shooting...like now when I feel that shooting pain, it registers with me. It brings me back to when I had her (daughter). (6)

On reflection in the post partum period, a few women in the study commented that their preterm contractions were similar to the onset of labour that progressed to the birth of their babies. A nulliparous woman who used only nitrous oxide gas for analgesia during labour remarked that she was unprepared for “just how intense some of that stuff (preterm contractions) was going to get.” She was “definitely” aware of the intense pain associated with contractions at seven centimeters dilation; however, she perceived little difference in contractions at the onset of her final labour episode compared to preterm contractions. This participant found the only distinguishing feature to be a stronger intensity in terms of interior effects.

The cramping was the same. It wasn't any different to what I had been experiencing before but just the intensity of the...I guess the pull inside just felt a little bit stronger. (12)

Likewise, a multiparous woman who had previously given birth vaginally to a full term baby weighing more than 3600 grams commented on the similarity between preterm contractions and contractions experienced while in labour when her babies were born.

They (preterm labour contractions) were about the same (as labour contractions)...I think had I not been in labour before, they would have seemed a lot more upsetting to me. (16)

A recent survey analysis of the responses from 235 women admitted in spontaneous labour, explored how women recognized and reported the onset of labour at term (Gross, Haunschild, Stoexen, Methner, & Guenter, 2003). The authors concluded that most women

perceived labour onset to take place at a specific point rather than as a gradual transition covering the last few days of pregnancy. The onset of labour occurred in diverse ways for the women who responded to the survey, and they were able to recount specific symptoms that indicated the onset of labour at a precise time. Recognizing that no test can accurately determine the onset of labour, these authors suggested that a woman's account of labour onset is equally accurate as any acceptable institutional method.

Akin to this, the women in the current study demonstrated dependable identification of the onset of labour when they compared new or changed symptoms to an established baseline of acceptable symptoms. They were able to recall specific times that symptoms started and stopped. Rubin (1984) observed that labour stops and starts frequently. Rather than "true" and "false" labour, Rubin referred to the final episode of labour that ends in childbirth as "progressive labour" (p.59).

### ***Waiting to See if it Stops***

While study participants received antepartum care at home, they were taught to seek help prior to 34 weeks gestation if their membranes ruptured or if they experienced preterm labour symptoms that persisted for more than an hour. They were taught to call 911 for ambulance transportation to hospital if they experienced frank bleeding or the sensation that their babies were going to be born. All study participants waited at least an hour to evaluate the nature of symptoms in relation to their established baselines, and only one woman, who gave birth at home, called 911 when she realized birth was imminent. Length of time between recognizing preterm labour symptoms and deciding to seek help differed between study participants depending on the risk they perceived for their babies. Use of self-

management strategies while they carried out self-assessments to determine the urgency of their situations also varied between women in the study.

When study participants recognized a change from their baselines that they suspected represented labour, they embarked on a thorough self-assessment. Some participants referred to antepartum care at home guidelines when they noticed preterm labour symptoms after they had been discharged from the program. Women in the study waited to assess themselves for at least one hour so they would be knowledgeable about their situation and able to explain their symptoms accurately to health care providers. One participant went beyond the usual self-assessments and checked urine against tap water on a sanitary napkin to be sure that she had ruptured her membranes and had not been incontinent of urine.

...like I actually weed on a pair of knickers, and I then had the knickers with water on them. I did absolutely everything because you know, you're thinking, "I've got to know what's up"...and "no, it's not like wee. It's not the same." (20)

Several factors, including distance to hospital, gestational age, previous experience with preterm birth or preterm labour, and whether study participants perceived the symptoms to be within their "normal" baselines, influenced the length of time that women in the study felt comfortable waiting at home for symptoms to subside. Study participants waited longer at home if they lived nearby the hospital. Several women in the study stayed with friends or relatives who lived close to the hospital so they would have less driving time in an urgent situation.

Gestational age had a strong influence on how long women in the study would tolerate symptoms before seeking help. At term they were no longer worried about the baby and were comfortable staying home, whereas study participants were much more anxious to seek help early prior to 34 weeks. Interaction with the medical system prior to 34 weeks on

the first episode of preterm labour had the effect of reducing participants' concern about giving birth preterm after 34 weeks gestation. These women felt that the worst was behind them and the baby would be fine. One woman planned to wait as long as possible before going to hospital when she went into labour after 35 weeks and explained how she was no longer concerned about the effects of prematurity on her baby.

I think because I'd already been in preterm labour and I knew that he was going to be safe...it was quite a relief that his lungs were going to be formed and his vision wasn't going to be, you know, a problem. You know...that was my major concern really about his health. (20)

Previous experience with preterm labour in a previous pregnancy also affected how long study participants would wait. One woman had previously given birth at 26 weeks and she did not want to wait until the labour progressed to that point.

...like with (daughter) I let it wait to get to the point where I was timing the contractions to a certain point. And I said, "Okay, something's seriously wrong here." I didn't let it wait...I didn't allow it to get to that point. (6)

Another participant who was pregnant with twins understood that her cervix had dilated to two centimetres while she was unaware of contractions. She compared future symptoms to those that had caused dilation in her first episode of labour and she sought help soon after she became aware of a change in contraction intensity.

And those ones weren't painful at all. They were just tightenings. But yet, they were causing me to progressively dilate. (2)

Each new symptom that was not part of their repertoires of "normal" baseline symptoms, was given more attention and assessed with more urgency. One woman explained how she knew that professional assessment was needed because, "There was the two things...there was the pop and then the contractions changed" (2). Whereas when preterm labour symptoms were the same type and intensity as those experienced prior to admission to



antepartum care at home, study participants waited longer to see if their symptoms would stop or if they would get worse. Women in the study did not seek help until the frequency or intensity of those symptoms grew beyond their baseline parameters. One participant described how she waited more than four hours before her contractions exceeded her baseline and then she decided to phone the hospital.

...they just got stronger and stronger and stronger and it was just finally to the point that about 8:00 (p.m.) I said to (husband) that I was seriously considering making the phone call because it just seemed a little bit too much. And then about 8:30 I just said, "It's got to be this...this is just...this doesn't feel right." (12)

While assessing preterm labour symptoms, some study participants used relaxation and self-management strategies that they had learned while receiving antepartum care at home. Their strategies included drinking a large glass of water, emptying their bladders, changing position, soaking in a warm bath or shower, applying a heating pad to aching areas, being massaged, and focusing their minds on other things. Enthusiasm for using self-management strategies varied between participants. Some women in the study used them often and believed that they reduced symptoms while other women gave up trying them because they had achieved no benefit. One participant explained that the strategies helped her in relieving discomfort related to an increase in preterm labour symptoms, but they did not reduce the frequency or intensity of symptoms.

So I'd have a hot bath or I'd jump into the hot tub for a second or two or I'd use my heating pad or something...just anything to kind of subside it. It made me more comfortable but it...it didn't make them go away usually or anything like that. (8)

Another participant had purchased a special cream for massage and found that a combination of measures stopped her contractions.

And with the shooting pains, I know when I get those shooting pains, that I am probably contracting, but I can stop it too...I've gotten in the bath a lot. I will put my feet up and drink water. A lot of the stuff that they taught me when they were coming to the house. (6)

Another woman found all of the strategies a waste of time.

I tried moving around a little bit, just kind of moving from side to side and maybe a little bit on the back with a pillow around, and then if that doesn't work then I just go to the washroom, I grab a glass of water on the way back, drink that, and just kind of hang out here...grab the heating pad thing, lie down, throw a blanket on, that kind of stuff, try moving around again a little bit and...I have to be honest with you, the last probably 3 or 4 days I've given up on like the heating pad thing because it doesn't work for me; the shower thing doesn't work...I've tried them, so I kind of give up on that stuff so mostly I just try drinking a little bit of water and changing positions.

Since it doesn't seem to help I don't find a lot of use in doing a ton of that. (12)

Women who participated in other research projects attempted to make sense of their first episodes of preterm labour symptoms by waiting to accumulate more data to confirm their feeling that the symptoms warranted professional assessment (Coster-Schulz & Mackey, 1998; Patterson et al., 1992; Weiss et al., 2002). Like in the present study, waiting behaviours of those women were influenced by the degree of threat that they attributed to symptoms. Women in those earlier studies made plans to seek help at a later date, often corresponding to a scheduled appointment, and they used comfort measures to manage their symptoms. Participants in the current study had the advantage of a known diagnosis and education geared to self-assessment, self-management strategies, and help-seeking guidelines. When these women recognized their next episodes of preterm labour symptoms after having received antepartum care at home, they used structured self-assessment protocols and they then followed the antepartum help-seeking guidelines when they decided to "see what's going on."

### *Seeing What's Going On*

Assessment in hospital entailed “seeing” whether symptoms reported by study participants had resulted in changes that could be measured by professionals to confirm that these women were in labour. Study participants referred to “seeing what’s going on” with the understanding that their body knowledge required verification through objective assessment by professionals. All of the investigations that were undertaken by professionals in the hospital involved looking at or feeling the body parts of study participants that were hidden to the naked eye. Each test and examination carried out by professionals quantified what was happening in the bodies of women in the study. If professional knowledge verified body knowledge and measurable cervical changes met criteria that currently define preterm labour, reconciliation was not necessary and study participants remained in hospital.

However, examination results did not always correspond to the interior perceptions of study participants and these women tried to decipher professional interpretation of investigations within the context of their experiences. Examination results that were interpreted by professionals provided the concrete “evidence” that study participants equated with “truth.” Women in the study had trusted their body knowledge when they decided to seek help because they did not possess the tools to “see” and measure changes that they had perceived. When professional knowledge did not correspond with body knowledge, study participants felt intense humiliation and frustration that led to self-doubt in their abilities to accurately know the meaning of their body cues in the future.

There were two subcategories of “seeing what’s going on:” “expecting to be believed,” and “wanting more information.” Study participants went through these subprocesses in hospital if they were “proven” wrong by professional knowledge after they

had decided to seek help based on their body knowledge. On recognizing their next episodes of preterm labour symptoms and following help-seeking guidelines, study participants arrived at the hospital expecting changes to be found. They were emphatic that they would not have made the trip to hospital otherwise. When changes were not found on professional assessment, humiliation and self-doubt surged within participants as they internalized their “errors” and they felt disbelieved. Wanting to avoid this same “mistake,” participants searched for more information to explain the meaning of their symptoms and to help them identify a “real” episode of labour in the future.

Study participants valued professional knowledge and often adopted medical jargon to describe examination results. They were comforted when told that the fetal heart strip was reassuring because it meant that the professionals knew that the baby was fine. These women especially looked forward to ultrasounds because they were included in “seeing” the baby and internal parts that revealed the status of their condition. The “we” that one woman used in describing her hospital assessment suggested her participation in the process of discovering what was really going on.

Did a 3-D and internal as well...cause I guess when he did the 3-D the baby was so low. He can't see the cervix really because his head is blocking it...like he's just, he's in there. So we did the endovaginal and the cervix is actually only moved about a half centimetre or so since the last internal. So he did an internal, he said, the cervix is pretty soft but hasn't really shortened that much and the internal os is still closed. So, that's what they're looking at I guess. (12)

Women in the study focused on whether contractions were recorded by the electronic fetal monitor and valued the visible proof from technology that contractions were present. When one woman saw that her contractions were registering on the monitor she commented, “It was a big relief actually...to know for sure that the pains that I was feeling were the

uterus contracting”(6). In these cases, study participants perceived that attention from professionals was well deserved and the participants remained in hospital while they awaited the next step in management.

If cervical changes were found when participants did not perceive a change in their condition, they were grateful for the technology that discovered hidden “facts.” This was the case for a few participants who were told by professionals that there were cervical changes when they had not noticed a change in their condition. One woman described how thankful she was that professionals had the expertise to detect cervical changes caused by her “silent” contractions.

So it's the change in the contraction type, but the silent contractions or whatever you want to call them...they were causing dilation, and if I hadn't gone into the hospital...who knows if they would have been able to stop it. (2)

Another study participant experienced no preterm labour symptoms and had significant cervical changes which were unexpectedly identified on professional assessment. This woman lost confidence in her body knowledge and “was so glad and so happy to be in the hospital” (19). Though she feared giving birth prematurely, she was less anxious after she was admitted to hospital because competent professionals were constantly in attendance to interpret the significance of symptoms and test results and to decide for her if she was in labour. This woman was relieved that she was no longer responsible for keeping her baby safe.

Preterm labour symptoms often subsided while study participants waited for test results and, without proof of the intensity of their experiences, they worried that they appeared to have over-reacted. They desperately wanted professionals to believe that their symptoms had occurred while they waited at home. One woman wished she had brought her

written record of contractions so “they could see that I am kind of doing my homework,” and it would have provided evidence, “to say that I’m not bullshitting ya. This is what is happening to me, this is why I’m coming in” (7). Without proof, she felt “silly” when her contractions almost stopped while she was being monitored.

So I think that would have made a lot of difference if I had had that piece of paper (self-record of contraction frequency), if I had those contractions on the strip...that would have made me feel a lot better. I wouldn’t have felt as silly, walking out of there, going “hmmm.” (7)

These women began to doubt whether they had actually experienced the symptoms to the degree they thought they had. One woman described her struggle when professional findings were totally incongruent with her experience.

Like the two things just don’t match. What you feel and what they see are so unbelievably different that the only possible explanation is you’re a wuss or you’re crazy. There’s just...there’s just too big a chasm between the two things, which is why I think they don’t believe you...or they give you the impression that they don’t believe you. But, see it’s...how do I explain it...it’s even worse than that...is that what they see is so different from what you feel that you start to doubt what you feel. And then how are you supposed to do that when what you feel is the only way that you’re supposed to know whether it’s the real deal? (12)

Humiliation that these women felt when “nothing happened,” resulted from embarrassment with what appeared to be their inability to know what was happening in their bodies. One participant explained, “(you) kind of mistrust your body” (8) as she described her embarrassment and frustration with what seemed like the defective performance of her body. She blamed her body for causing her to think that she was in labour and she decided that her body was “lying.”

Just the whole...your body...you get so anxious over what things are and you get frustrated with it. You get frustrated with other stuff around but it all still comes back

to your body. It's your body that's doing it to you, because you wouldn't be in this position if it wasn't. (8)

Study participants reported greater faith in professional knowledge because of its capacity to use and interpret technology and provide the "correct" answers. Most participants affirmed the superiority of professional knowledge over their body knowledge because they lacked experience with preterm labour and did not have access to the specialized knowledge that is available in hospitals. One woman stated that it was impossible for her to "know what was going on" without the appropriate technology.

...it was just a case that I didn't know what was going on and I just wished I could do a home test rather than...then phone her up and say, "You know what? I've had lots of fluid but I've checked it and it's okay and the baby's fine. Do you want me to come down anyway?" You know, I suppose it's fear of looking ignorant. To me it's a fear of looking stupid. (20)

Science and technology provides useful diagnostic tools and a means to detect significant changes that warrant interventions to improve outcomes for women at risk of preterm birth (Iams, 2003). Study participants valued the information that could be gained with the help of science and technology, yet their experiences of not knowing their bodies as well as professionals claimed to know them, resulted in embarrassment, frustration, and self-doubt. With the help of medical technology, professionals have the authority and ability to "see" what is going on. Professionals use electronic fetal monitors to visualize the presence of contractions and the fetal heart rate pattern. Ultrasound is used to measure the length of women's cervixes. Fetal fibronectin is tested to predict whether women will give birth preterm, and nitrazine and ferning tests are used to confirm ruptured membranes (Appendix A). Professionals used these investigations with an air of confidence that gave study participants the impression that professional knowledge more accurately evaluated what was

happening in their bodies compared to their private interior knowledge. Unknown to most of the study participants was the considerable potential for human error and inconsistency in interpreting the results of scientific tests. Sheila Kitzenger (2000) described the possible detrimental effects of modern science and technology when objective measurements and assessments are forced on a process that has historically fallen in the subjective domain of women. Regarding ultrasound specifically, she warned, "This can be used to reinforce the mother's sensitive awareness of her baby. But, in effect, ultrasound in a modern medical system often imposes another order of reality that negates the mother's own knowledge" (p. 31).

Young (1997) explained how medical discourse and practices transform a body from a social entity into a medical object. She described the process of disembodiment by which professionals strip away personal boundaries, changing persons into patients, and inspect segments of the body for pathology. Young identified the problem central to medical examinations as "the fragile, stubborn, precarious, insistent insertion of a self in the body" (p.45). In pregnancy, it was this embodied "self" that was consulted and credited with knowing what was happening in the hidden parts of a woman's body until the past 40 years (Duden, 1993). With the advancement of technology, professionals acquired access to the fetus and, as Duden described, the historical relationship between mother and baby changed. Duden's work focused on the development of ultrasound technology that permitted visualization of the fetus, and she described the "habituation" of Western society to "visualization-on-command," accepting "only those things that can in some way be visualized, recorded, and replayed at will" as part of reality (p.17). Since conditions of pregnancy can now be seen and evaluated by an outside observer, the power to construct



reality pertaining to pregnancy no longer belongs to pregnant women. In the current study, this characteristic applied not only to ultrasound, but also to speculum, fetal fibronectin, ferning, nitrazine, and electronic fetal monitoring (Appendix A). Women do not have access to these tests that allow professionals to “see” what is going on, and as one participant said, “it’s the fear of looking ignorant...a fear of looking stupid” (20) that makes women hesitant to seek help.

### ***Expecting to be Believed***

Women in the study expected professional knowledge to match their body knowledge. They expected professionals to verify their appraisals of symptoms because prior to going to hospital, study participants had usually consulted the triage nurse, the antepartum care at home nurse, or their doctors. On the basis of their descriptions of symptoms over the telephone, the professionals had advised them to go to the hospital.

These women emphasized that they went to the hospital because they had decided that their symptoms represented a threat to their babies. They recalled how “terrifying” it was to think that the baby could be born prematurely, or how “scary” it was to think that the baby could get an infection if the membranes were ruptured. Study participants maintained that they would never want to go to the hospital unless it was absolutely necessary, suggesting they had made a sacrifice for the baby’s sake. One participant commented, “you know, spending a night in the hospital...you never sleep properly. You’re tired, you wake up in the morning...it’s not a fun thing. The food’s terrible”(8).

Expectations that symptoms had resulted in cervical changes were formed through seeing others in labour, past experiences with labour, prenatal education, and antepartum care at home teaching. One nulliparous woman described her pain as “what I would typically

associate with actually being in labour, just in terms of how you see people and they're in absolute pain" (12). Another woman who had previously given birth at 26 weeks said, "it's supposed to happen really quick. My daughter...it happened quick" (6). And another recalled, "I'd done it before and I remembered" (16).

Although study participants expected health care providers to believe that there were good reasons leading to their decisions to go to the hospital, when they were told that "nothing happened," they tried to accept their verdicts graciously. One woman commented that, "it's not all that important to me if they believe...it's not about me...it's about my little boy" (12). They remained loyal to their health care providers and gave professionals credit for a job well done. However, in their hearts these women did not feel believed. Most participants were sensitive to the responses of hospital staff and one woman felt laughed at, yet she was careful to be complimentary of those same professionals.

Because when I turned up there as well, I saw a lovely midwife who used to come and see me. Anyway, I saw her in there and I said, "Hi," and she said, "Oh, you're obviously not contracting, are you? Look, you're ever so happy." I said, "No, I'm just, you know, having things checked out." So she was laughing about that. And uh...so, I knew that I wasn't in labour but I just wanted to have it checked out for my peace of mind...(20)

Another woman remained loyal to hospital professionals when attempting to explain why she felt guilty for returning to hospital for vaginal bleeding. By the time she was examined her bleeding had stopped and professionals found "nothing" wrong with her.

...it's nothing about the hospital; they are very friendly and the staff is very welcoming. Like they always check you very well. I don't know. Like when I had bleeding, I went. I was scared. Bleeding is so scary so I went, and I didn't have anything and then I felt guilty. We just went there and nothing was wrong with me. (19)

When study participants expected health care professionals to believe that they had experienced another episode of preterm labour and they were told that “nothing happened,” they were disappointed. One woman described her disappointment with appearing to have over-reacted and “waste everybody’s time.”

Cause when you go in and they say, “Well, there’s nothing going on!” And, you know, you feel...you feel stupid almost cause you’re like “Okay, well I came into the hospital, I wasted everybody’s time.” Because, honestly that’s the way you feel. You do. You feel like you’ve wasted someone’s time because there’s no change, and you’re frustrated because there is no change, and you just feel like you’ve wasted people’s time...It’s disappointing. (8)

Another woman reflected on how difficult it would be for professionals to know who to pay attention to and who was over-reacting because they were suffering from “other anxieties.” This participant suggested that, “you can’t just believe every woman that walks in and says, ‘definitely something is happening here,’” yet she did not know how to convince professionals to pay attention to her complaints that were real and required further assessment. She noticed that another patient in hospital had many staff members attending to her when she was “only a centimetre dilated” because she was crying and in pain. The participant concluded:

They’re paying attention to her. Now she’s crying and really...maybe that’s what I have to do...maybe I really have to look like I’m in awful, awful agony and then they’ll pay attention. Cause you know that you can’t take risks. (16)

As they began to doubt their body knowledge, study participants suspected that “people” might not believe their stories. Some of these women admitted that they secretly hoped that professionals would find something to validate their experiences. This led to more guilt as they wondered how they could wish for changes that would increase the likelihood of preterm birth and put their babies in danger. One woman, who did not want to feel crazy for

suspecting she was in labour again, described her guilt related to feeling disappointed that “nothing” had happened.

And worse than that...almost secretly hope that something had changed...And, you know, typically because it is pre-term, that's a bad thing because you shouldn't want that. It's not “wanting” it, but expecting it. You know what I mean? Tiny little thing of guilt for thinking...for thinking it had changed. ...and then almost a bit of...almost a little bit of disappointment even though you know you shouldn't want the wrong thing. And it's just that thing of just not wanting to feel crazy...that's really what it is because if you keep thinking that it's different and nothing changes, then you must be crazy. (12)

Women in the study worried that their friends and relatives doubted the seriousness of their experiences because preterm labour is uncommon and people are unfamiliar with the nature of labour starting and stopping. They imagined that people would judge them unfairly and think that they were “whiners,” complaining about aches and pains that were to be expected in pregnancy. The participant who gave birth at home felt she needed to prove it was a real episode of labour to her husband.

I think it relates to me wanting to prove to my husband that it was real...Because...there's one comment that he commented about me that I didn't like, was that, in general, I'm a whiner to pain...like if I have a little pain I will whine while he, and like maybe other guys, in other people in general, they can tolerate pain a lot better. So, because of this stereotyping that I'm not happy with, I feel the urge to prove that “hey, this is a real episode.” Because subconsciously we don't want to cause trouble to others, right. So, yeah, it's always there. Like every episode. (17)

Another participant admitted that she would have been sceptical about the reality of her own experience because she had never heard of preterm labour before she had experienced it.

So, you know, I don't know. I think there's...I couldn't pinpoint anybody specifically that think I'm a big whiner. I couldn't do that. I just...my own perception is that there's probably a fair number of people who really believe that this

is probably a little bit a figment of the imagination or something along those lines.

(12)

Several participants who experienced recurrent preterm labour episodes decided that it was better to keep the details of each preterm labour episode private because most people did not understand the nature of preterm labour. One woman avoided asking her girlfriends for advice because they thought she was having Braxton Hicks contractions and “they don’t know any better”(8). Another participant explained how society, in general, expects women to start labour only once and that people do not understand the complexity of preterm labour.

Yeah, because culturally, and the society, people only understand that you go into labour once. People don’t understand that you may go through...you know, you should budget for it; that this is part of the norm to have a few, you think it is labour but it’s not labour...A few episodes, right. So society does not understand that. So we feel the guilt, like “why am I not being normal?” While you’re being normal, it’s just that society is not educated well enough that this is part of it...Because people in society don’t want to hear you’re going through ups and downs. They want to hear you’re going better or...like, they want a definite answer. They don’t want to hear complicated stuff. (17)

Some study participants who endured several “false alarms,” implied that the ultimate humiliation would be to go post dates. These women felt that giving birth preterm would prove that their experiences of preterm labour were “true,” whereas going post dates could be interpreted as evidence that they had been over-reacting. Several participants volunteered that they “downplayed” symptoms to friends and family as a “protective mechanism” in case they were induced post dates. One woman confessed her “biggest fear was to have to go to 40 weeks and then be induced.”(20)

Feelings that they were not believed had lasting impressions on some study participants. Even after fear for the baby had passed as some women in the study approached

full term, self-doubt in their body knowledge persisted and symptoms of labour caused anxiety. One participant who had experienced recurrent preterm labour symptoms without cervical changes found that “the anxiety kind of played into the tightenings”(8), and she feared that she would misread her body cues. Another participant with a similar history of recurrent preterm labour symptoms described her irritable mood and loss of appetite on the day she went into labour at term. She attributed this to suppressing the desire to announce that she was going into labour, lest the mere articulation of her suspicion would impede the process.

I believed in my heart of hearts this was it, but I wouldn't let myself believe it because I had been wrong so many times before. Do you know what I mean? And I think that's what made me irritable is because I was thinking...I was just thinking “I just have this weird feeling today, but you know what, I've had it before and I can't get excited about it because it's never going to happen.” You know, that kind of thing, so I almost...I think I knew, but I didn't want to believe that I knew because I thought, “if I actually articulate this to anybody, it's not going to happen; I'm going to be wrong again. This is just going to be one more thing that didn't happen.”(12)

Outcome expectations are integral to the process of determining health behaviour (Bandura, 1997). Women would have no reason to seek help if they did not expect that their conditions warranted professional assessment. Preventative health behaviour is influenced by four factors: “perceived threats, benefits, barriers, and cues to action” (p.283). Bandura distinguished between response efficacy, where a person believes a particular behaviour will produce a particular result, and outcome expectations, where the person expects that the results of the particular behaviour will have specific consequences. Social cognitive theory (Bandura) supports the notion that participants who had received antepartum care at home would follow the help-seeking guidelines if they had decided that a subsequent episode of

symptoms represented preterm labour. However, if professionals told these women that their expectations were extreme, they would not repeat the help-seeking behaviour under similar conditions.

Patterson et al. (1992) found that seeking professional assistance on more than one occasion was challenging for women. They gathered convincing information about their symptoms to impress professionals that further assessment was essential. To demonstrate the severity of symptoms, some women cried in response to pain, while others were not able to walk, and some reported shortness of breath. However, the psychosocial factors that influenced women to describe symptoms to impress professionals of the severity of the situation have not been explored. Findings from this study indicated that there was a substantial emotional component associated with participants feeling disbelieved that influenced the process and potentially inhibited help-seeking in future episodes.

Rubin (1984) described humiliation and low self-concept resulting from “false labour” at term. Parallel to the findings of the current study, she explained that women perceive the “falseness” as a reflection of themselves and their knowledge, and that their humiliation is not restricted to the hospital, but continues in the presence of family and friends. Rubin suggested that the magnitude of the embarrassment is so great that women choose to postpone help-seeking in the next episode of labour because they “can endure the pain of contractions better than the humiliation repeated” (p.91).

### ***Wanting More Information***

Study participants desired more information about recurrent worrisome symptoms that were outlined in prenatal literature and antepartum guidelines as forewarning signs of preterm labour that the health care professionals had not labelled preterm labour. They

reported their frustration when they “couldn’t get much information at all” and wondered, “what is this?” They were perplexed at how they could have experienced all of the warning symptoms for which they had been watching and “nothing” had happened. These women underwent a battery of investigations to rule out preterm labour, but they were not given satisfactory explanations about what they had experienced if it was not preterm labour. They were sent home without new knowledge to help them interpret the meaning of their episodes in relation to professional assessment. Study participants searched unsuccessfully for an explanation that fit their experiences, and were puzzled with how they should use their body knowledge if they experienced another episode of symptoms.

Study participants expected professionals to know and tell them why their symptoms seemed to be preterm labour, yet did not cause progressive cervical dilation. They interpreted rationale given by professionals to mean that they had not experienced preterm labour after all, and this explanation was not adequate. One woman said to her husband, “If they think they know so much, then what’s happening? They think they’re so smart, and I don’t know, apparently, then you tell me”(16).

These women did not readily accept normalizing terms applied to contractions, such as “Braxton Hicks,” “practice contractions,” “tightenings,” or “irritable uterus” because they had used these terms to describe their baseline symptoms. Their decisions to return to hospital were triggered by symptoms that were different from their baselines, which meant there must be something else happening. One participant assumed that she was not informed better because “that’s probably asking for more time...and its one thing that’s lacking in the hospitals and doctors and everything...is time.” She explained further, “they poke you with needles and you don’t know what’s going on; the doctors don’t really tell you too much



so...because they don't know anything. When nothing's changing, there's nothing to report to you..."(8). Likewise, a few other study participants concluded that doctors do not really understand the nature of preterm labour and do not have the answers to give. One woman who asked her doctor for more information felt demoralized by the response:

Because the physicians deal with typical pregnancies...logically they're telling you things that don't make sense, and when you call them on it, you get attitude...and you get the, "Hmm..." the eye-rolling...And they don't have those answers, they don't try to provide them, but they try to make you feel stupid for asking the question or they just move on. Which at that point you stop asking the questions, which is why the Program is invaluable. (12)

Unconvinced by professional explanations, most study participants looked to other sources of information, but they were not satisfied with what they found. One woman recalled, "little excerpts in the book that I have but it doesn't kind of explain the situation that I'm in"(8). In contrast to this, the study participant who had a diagnosis of incompetent cervix was able to find information on the Internet that corresponded to explanations given by health care professionals, and she was content to put her entire faith in professional management. Other women in the study searched for alternative etiologies, but their attempts to explain why the symptoms occurred were equally unsuitable to them and most of these women came to the conclusion that they "can't even explain it." However, one woman coped with her constant worry by attributing each symptom to an acceptable variation of pregnancy.

The shooting pains...well, they...I can't really...to me that's Braxton Hicks. That's what I'm assuming in my own mind. That's what I've taken it to. The back pain I don't know if it's the baby turning to get ready. Like cause the ...what I've read and they've told me, it's better for the baby's face to be down and sometimes as the baby

turns that will cause you to have the back pain. And, I assume too, because of the size of the belly, that would cause quite a bit of back pain. (6)

Some women in the study who could not find a plausible reason that fit their experience decided it was “false,” or “bad luck.” Others resorted to self-blame, “like stress or something,” or being “almost paranoid.” After considering and rejecting fetal engagement as a possible explanation for her symptoms, one woman concluded that her symptoms must have originated in her mind:

So I don't know what it was. I don't know why. I don't know if it was just a reaction because of maybe bringing them on myself. Knowing that I was 32 weeks and maybe there's something going on with...you know, brain to baby...kind of going, “Okay, you're suppose to be acting up here.” I don't know. (7)

Although wanting more information from professionals, some participants mentioned that the most helpful aspect of receiving antepartum care at home was the education that helped them understand the unpredictable nature of preterm labour. When the reality of symptoms was acknowledged and participants were given permission to call it “true preterm labour,” their experiences were validated regardless of the presence or absence of cervical changes. One participant explained how the antepartum care at home education comforted her in the belief that “something's changing, and this is my process, and it's different from everybody else's, but it doesn't make it any less real” (12). She contrasted this to how she felt prior to receiving antepartum care at home:

Because everybody sort of said, “Well, you just have an irritable uterus.” So (husband) and I joke about my cranky uterus, right. And we think that's kind of funny, and then all of a sudden you're in a fair amount of pain, and it's not so funny anymore and you're kind of like, “Well, wait a minute.” And so I think one of the really nice things about the program is that it's really helped educate me on the fact that a) there is such a thing as pre-term labour...it's real. (12)

Additionally, some study participants found that while receiving antepartum care at home and carrying out regular self-assessments, the education helped them to eliminate symptoms that might have caused concern and unnecessary trips to the hospital if they had been uncertain of symptom meaning. Without carrying out self-assessments to look for a change in symptoms compared to baseline symptoms, they would not have known how to “gauge” when symptoms warranted professional assessment. One woman explained:

They (antepartum care at home nurses) provided information for me to kind of gauge on when I should trust my gut, cause sometimes you shouldn't when you're anxious. So it was just more of an information, and that's what made the transition (to a pregnancy at risk) easier, was just the information provided. (8)

The women in this study accessed help from professionals who used objective criteria from hospital investigations to diagnose preterm labour. When worrying preterm labour symptoms had prompted these women to return to hospital and they were told that “nothing” had happened, explanations from professionals were inadequate to help them to understand their experiences or to reduce their shame. Some of the labels that professionals applied to their symptoms, such as “Braxton Hicks contractions,” minimized their experiences. Other terms, such as “irritable uterus,” implied defective performance of women's body parts and were demeaning to participants. Previous nursing research has demonstrated that when professionals use alternative labels for contractions it is not helpful to women (Freda, 2003).

Freda (2003) recently reviewed evidence-based implications for nursing practice related to strategies for educating women about preterm labour symptom recognition and appropriate help-seeking. Freda found that there was sufficient existing knowledge to guide effective nursing practice. However, the women in this study received adequate education, but they found that it was useful in supporting them to seek help for only one episode of

preterm labour. If their experiences were inconsistent with objective findings when they returned to the hospital for a subsequent episode of preterm labour, and professionals did not satisfactorily explain the phenomenon, the initial education lost credibility. As social cognitive theory implies, women will self-evaluate outcome expectations and adapt their behaviour accordingly (Bandura, 1997). Participants in the current study did this by reconciling the difference between their body knowledge and professional knowledge as they established their own guidelines in a “new normal.”

### *Setting a New Normal*

Study participants went through a process of reconciling body knowledge and professional knowledge each time they contacted a health care professional. They reset their baselines of nonthreatening preterm labour symptoms in response to their interpretations of professional knowledge at the time of assessments. If there were cervical changes, especially on the first encounter in hospital, study participants “lowered the bar” and became more sensitive to variations of the same symptom. Awareness of these symptoms on another occasion at home prompted them to return to hospital when they “knew something’s not right.” Many of the women in the study reported that they were told there were no concerning changes based on professional assessment despite the presence of preterm labour symptoms. In these situations, the women “raised the bar,” and the new intensity of symptoms was integrated into their acceptable baselines. Several study participants referred to this mental gauge for comparison of new symptoms as their “new normal.”

There were three subprocesses that contributed to how study participants set their “new normals:” “relying on professional knowledge,” “wanting to get it over with,” and “trusting your gut.” Evolving from the humiliation they experienced in “seeing what’s going

on,” and lacking visible proof and understanding of the meaning of their interior knowledge, study participants decided that “relying on professional knowledge” was their only option to reset their baselines of “normal.” This was not an innocuous process as many participants continued to experience preterm labour symptoms. They were unable to erase their increased awareness of their body knowledge and they became emotionally exhausted from constant anxiety related to uncertainty in deciding when to seek help. Many study participants became overwhelmed with “wanting to get it over with” so they would be free of the responsibility of keeping their babies safe while not wanting to over-react. In the face of this mounting tension, study participants insisted that they would know when to return to the hospital by “trusting their gut” rather than taking a risk for their babies.

Study participants described how they established their “new normals” by incorporating their subjective body knowledge with objective professional knowledge. One woman explained how she did this:

Where I know that nothing’s changing, I know these pains are okay, so again let’s move the bar to this normal, and we’ll go from there. Right? So the doctor was the only consistency there, where I could set it by the doctor. (8)

Another participant heard that her fetal fibronectin testing was negative and she concluded, “Well, okay, this is the new deal, so now it’s just pain management.” This woman explained the benefits of establishing a baseline of acceptable symptoms on her recording chart while receiving antepartum care at home because it helped her objectively compare new symptoms with those that were not found to have changed her cervix on professional assessment.

So I think that’s been really helpful just in terms of...if you can keep all this information, you can look back and you say, “you know what, objectively it’s not that different every day.” Right. And yeah, this day was a change but okay, so we got out

of our comfort zone a little bit and now that's part of your new comfort zone, so okay. (12)

"Setting a new normal" was often a course of action that was emotionally driven.

When new or more intense symptoms occurred with no measurable changes based on professional assessment, study participants were distraught with what appeared to be their incompetence in body knowledge. They sought common ground between what they had thought was happening in their bodies and what was "truly" happening according to health care professionals. In this way they created a new "normal" of baseline symptoms that would alert them to a "real" episode of labour and avoid feeling like they had over-reacted again. Including more symptoms in their "normal" baselines, beyond the recommended guidelines to call for help, caused anxiety because "your normal keeps changing." These women then lacked confidence in their abilities to know when symptoms had reached a new level that warranted professional assessment and they worried that they could put their babies in danger if they waited too long. One woman explained her plight:

You can't figure out what you're suppose to do. I'm suppose to be on bedrest, and then I'm supposed to be up and doing things. And now I'm suppose to be normal, but now I don't feel right and it's not normal, but you're telling me to go home and...you just give up. (16)

Symptoms that were normalized by professionals during a previous episode of preterm labour were included in participants' "new normal" for future episodes. When listing symptoms that fell outside of their "normal," most women in the study considered show or vaginal bleeding and ruptured membranes to be worrisome signs that would motivate them to seek help. However, even these visible signs of preterm labour, fell within the "new normal" if their responses to the symptom had been minimized by a professional on a previous hospital visit. Once participants were numbed to the significance of specific symptoms, they

delayed help-seeking in a subsequent episode until the change was to a higher level or intensity of the same symptom. One participant trusted professional assessment and accepted that her membranes had not broken at 36 weeks gestation. She decided not to go immediately to hospital when she experienced a large gush of amniotic fluid two days later because “it was more of the same, it was the fluid thing,” and she clarified, “if it had been something different, we would have gone in again.”

...when my waters actually broke the following day...or two days after that, I sort of knew the situation. I could either go into the hospital and wait for 24 hours in a hospital bed and worry and not sleep properly and, you know, not enjoy myself at all, or I could wait at home, in the comfort of home, and have something nice to eat and all of that, so I decided to do that. (20)

Another participant waited an hour for her doctor's office to open when she passed a small amount of blood vaginally at 36 weeks. She knew it should be assessed, but she felt no urgency since she had experienced a larger amount of bleeding earlier in the pregnancy.

I didn't think it was anything good. It was a negative thought. Just because of everything I've had, but I didn't think it was to the point...like, in the past, they were big gushes of blood and this was not a whole lot...but I didn't...I didn't think...it was the beginning of labour or anything. I thought maybe a little more tears; something like...something that needs to get checked out but...that in the end they would say, “It's okay. Just go home and rest type thing...take a nap.” So...I wouldn't panic, but I knew...it didn't look right to me though. (4)

Contraction intensity was the most common symptom that study participants normalized within baseline parameters, and they attempted to ignore uterine activity unless they “literally could not handle the pain.” A few women in the study called attention to the potential danger of setting the pain threshold for contractions in the “new normal” too high because a change in contraction intensity was often the discerning feature that labour had

started. As one participant recalled, “show...I didn’t have any at all. None! And my water didn’t break until I was 10 and pushing” (8) Another woman explained how extreme her baseline had become:

I had gotten to the point where I basically said, “These are the two conditions under which I’m going in – one is that I can’t walk to the truck and (husband) has to carry me, and two, my water breaks. Those were the only conditions under which I’m going in.” Because there was nothing left. I mean I had done every single other symptom...those were the two criteria I set for myself. And then, you know, the other side of that is that you start to feel like an idiot because clearly that’s upping it on an extreme far right. I mean that’s a bit nuts right. But, because I had been coping with the pain for so long, I no longer believed that the pain threshold was going to tell me...If you get to the point where you start to set those stupid, really extremely high bars, you could be in trouble. (12)

Similar to these findings, Weiss et al. (2002) observed that when professionals minimized women’s interpretations of the potential significance of symptoms by normalizing them as variations of pregnancy, those women evaluated a subsequent episode of similar symptoms as equally harmless until the intensity became substantially greater. As in the current study, women in the previous study did not perceive that there was a threat related to similar symptoms and they did not seek help. “Setting a new normal” in this study was born from the dissonance perceived between body knowledge and highly valued professional knowledge and resulted in these women normalizing the symptoms for which they sought help.

After seeking help on a subsequent occasion when “nothing happened,” study participants returned home embarrassed that they appeared to have over-reacted, and frustrated that they had no other tools with which to make a more accurate assessment on the next occasion. Belief in self-efficacy is the most essential human attribute that motivates a



person to carry out desired behaviours (Bandura, 1997). The goal of professionals may be to support women in early recognition of preterm labour, however, in addition to interior body knowledge, women must have confidence in their ability to know when to seek help.

Women in this study recognized that the power to “truly” know seemed to be in the hands of professionals who used, interpreted, and communicated around a technological world beyond their reach. If a person does not believe that they have the power to impact outcomes through their actions, they have no incentive to perform the desired behaviours (Bandura, 2001). Self-doubt and lack of beliefs in self-efficacy reduced the motivation for study participants to persevere in seeking help appropriately in an atmosphere of newly created uncertainty. These women reset their “normal” to avoid embarrassment and humiliation that had led to self-devaluation. Their sense of control was diminished and they adjusted their plans for future actions to incorporate professional knowledge that seemed to have the ability to provide evidence of “true labour.”

### ***Relying on Professional Knowledge***

Women in the study relied on professional interpretation of tests and examinations carried out in hospital even when it did not correspond to their corporeal experiences. The conviction with which professionals interpreted investigations that objectively measured internal change was perceived by participants as the authority to proclaim what was “true.” When preterm labour complicated their pregnancies, fear for their babies obligated these women to rely on specialized knowledge to which they did not have direct access. Study participants struggled with their inability to make sense of the symptoms that prompted them to return to hospital, but conceded to the superiority of professional knowledge. One woman accepted that the doctor must be correct in saying that her membranes were not ruptured,

despite symptoms to the contrary because, "It could have been, but then when I'm told by my doctor it's not, I feel 100 percent happy it's not"(20) Another woman summarized, "Cause it's not doing anything. And that's what they've told me, and that's what I believe, and so I'm just ignoring it"(8).

Without confidence in the antepartum care at home help-seeking guidelines and with no new information from professionals that delineated symptoms warranting attention in hospital, participants were compelled to set a "new normal" themselves. They integrated their experiences with professional findings to create a specific set of acceptable symptoms unique to their situations. Their ultimate goal was to recognize "the real McCoy" when it did occur and they wanted the knowledge to identify a distinguishing feature that would be validated by professionals. Following hospital assessment, one woman concluded, "when they've done the internal we know that my cervix hasn't changed much. So, we know that I can get through all that with little change" (12)

Women in the study attempted to reduce the possibility that they would be perceived as over-reacting in another preterm labour episode by relying on professional knowledge to set their "new normal." This involved giving up control to professionals over a process that they did not understand and that was potentially dangerous for their babies. One woman decided to "just leave it be" since she knew, "the baby will come when it wants to and so I've got no control over it" (8). Another woman explained:

It's pretty tough because I'm a bit of a control freak. So the whole not being in control of any of this is pretty hard and not having, I guess, the really clear-cut things, I think is really hard. Like there's some things I know specifically that if this happens, make sure you go, or make sure you phone or...those kinds of things. But the rest of it, because it just sort of changes daily, or every other day, or every three

or four days, it's quite...it's like you're always getting used to the "new normal" and it's...it's a bit tough. (12)

Similarly, another participant related her reliance on professional knowledge and perception of loss of control to not having the answers needed to manage the situation.

I suppose it's because you're so inexperienced with it, and it's such a new thing...that you're so inexperienced and you're just like a fish out of water really. And somebody else has got all that control, and somebody else has got all the answers, and you haven't got the answers. So you feel like, "Oh! I'm going to have to ask them again." It's almost like if you take a class and you don't quite understand, and you have to keep putting up your hand to say, 'Can I just ask about that point again? Can I just ask...?' You do. You feel it with everything. You feel a bit guilty, don't you? Or say you're booking an airline ticket, you say, "Oh, can I have a seat by the window. And can I have a vegetarian meal, and can we have a sky car," and by the end you just think, "I shouldn't be asking for all this stuff. I feel embarrassed now." And I just think that's human nature. I think it doesn't matter what setting, whether it's a doctor or somebody behind a checkout or a cashier or a teacher. I think it's just because you are placing the control in somebody else's hands (20).

While this woman awaited the onset of labour after her membranes ruptured at 36 weeks she revised her "idealistic" birthing plan for natural labour and birth to a plan where professionals would be in charge of managing her induction of labour. She realized that her lack of knowledge excluded her from participating in most decisions as she explained, "you're (professionals) going to decide what happens anyway because we don't have enough experience to decide what happens to us"(20).

When study participants were symptomatic, but were told that there were no cervical changes and that they were not in labour, they were often given medical treatment that was intended to reduce the frequency of contractions. These interventions included intravenous hydration, sedation, and medication to inhibit prostaglandin synthesis. Women in the study

accepted these treatments and believed that they were necessary despite being told that they were not in labour. One participant recalled, "She still gave me the suppository to stop labour because she said that she preferred that I didn't go into labour on her watch"(2). Another participant who was unhappy to have been readmitted to hospital recited her treatment regime:

...and so they pumped me up with fluids and did an IV and did all that stuff and said they'd see if the contractions would subside. And about 8:00 they decided to just admit me for the night for observation. So they did that and drugged me up on Ativan® and off I went to sleep and...(8)

Most of the study participants were not admitted to hospital if their cervixes had not changed, and they reported that they were content to return home. A few participants opted to go home when their condition warranted more intense surveillance. These participants assumed that there was no risk because they were given a choice to go home or stay in the hospital. One woman who had prolonged ruptured membranes at 30 weeks gestation returned to hospital when she decided that she was in preterm labour. Her cervix was long and closed when examined in hospital and she did not feel confident contradicting the findings of professional assessment by explaining her perception that she was in active labour. This woman went home, where she dilated to eight centimetres within the next two hours (13). In another situation, a woman with a chronic abruption returned to hospital in early labour after her membranes ruptured. After being sent home again she described her contractions: "I couldn't really find a beginning and end to them...it was sort of uncomfortable the whole time" (16). She returned to the hospital when she noticed vaginal bleeding.

Although most of the women in the study relied on professional knowledge to set their "new normal," some of them noticed inconsistencies in medical management and

interpretation of test results. They questioned the accuracy of investigations, wondering if any two professionals would assess the same cervical dilation on vaginal exam or see the same images on ultrasound. One woman believed that “they really can’t say for certain, which is the one thing I found with this whole thing, is that nobody can really say for certain”(12). Another participant who was assessed by different professionals in hospital recognized several inconsistencies.

Every doctor kind of does it differently, and the nurses do it differently, and so it gets frustrating with...because you’d think it would be a set way, but everyone has different procedures and different...you know...well, ideas I guess, of what preterm labour is, what delivery is, and what test results are. (8)

Although these two women questioned the accuracy of their test results, without an alternative, they continued to rely on professional knowledge when they set a “new normal.” One of these participants stated, “I pretty much trust you guys that you know what you’re doing” (8). And several women implied that the only way they would know for sure if they were in labour is “to go in and get checked out” (7).

Coster-Schulz and Mackey (1998) identified “having no control” as one of the emotional responses women experienced once preterm labour had stopped and the women were stable. These researchers found that loss of control was related to living with a high-risk pregnancy and to activity restriction that caused dependence on others and prevented their usual way of life. Findings from the current study also revealed a perceived lack of control as a fundamental influence in the experiences of participants who had recurrent preterm labour symptoms as they decided whether or not to seek help. However, analysis of these data suggested that lack of control was related to a perceived knowledge deficit that necessitated reliance on professional knowledge. Power associated with privileged knowledge that

professionals claim, diminished participants' control to participate in decisions about their bodies and their babies.

Michel Foucault (1973), the French philosopher, historian, and social theorist, traced historical conditions from the eighteenth century, under which construction of privileged medical knowledge formed relationships of power and control for health care professionals over the patient. In a series of lectures in Rio de Janeiro in 1973, Foucault (2000) pointed out the distinct differences between the development of knowledge that is socially invented for the purpose of creating a relationship of power, and instinctual knowing that is part of human nature. Those who have access to specialized knowledge, hold power to define what is "true" and what is "false," and are, therefore, positioned to control or manage those who do not know. The power of scientific professional knowledge that has been constructed over the past two centuries demanded reconciliation of what women in this study thought they knew with what was professionally "known."

### ***Wanting to Get it Over With***

Beyond the activity restriction and discomforts of preterm labour symptoms that study participants endured for several weeks, they were worn out from the constant responsibility of deciding whether or not labour symptoms represented progressive labour. Setting and resetting the "new normal" was exhausting for them. These women experienced mounting anxiety related to their uncertainty that originated in the tension between not wanting to take a risk for the baby and not wanting to over-react. They did not want to give birth prematurely, but most study participants admitted that they wanted to get it over with so they would no longer be responsible for appraising symptoms. As one woman stated, "it

seems like it's going on forever" (16). Another woman described her frustration and stress from the constant worry:

And it gets frustrating with the tightenings too, right, because you just want it over with because it's like the constant...it's the same thing over and over and over. You have an episode of tightenings and you kind of get stressed out. Do I go in? Do I not go in? Is this different? And you just want it over with. (8)

Another woman trusted what could be seen and measured by professionals far more than her intuitive body knowledge. She explained that she would have been happy to deliver her baby at 32 weeks.

I would have been happy to deliver that child. Kind of get on with my life and not have to worry about something being inside me, whether, it's okay or it's not okay. So that I can kind of see what's going down instead of not really knowing what's happening inside...I'd like to get it over with because I want him out so I can see what's going on. (7)

Many women in the study were not overly concerned about their babies being born after 34 weeks when they had threatened to give birth at a much earlier gestation. They felt the time remaining in their pregnancies was a bonus and their anxiety lessened as they felt ready to give birth. One woman who had not reached term managed her preterm labour symptoms quietly at home so she would not worry her mother, but she would have been happy to go into labour.

I walk through the house at night time when I'm having uncomfortableness and if I'm going to have a bath I'll make sure she's (mother) asleep so she can't hear the water because she worries right away that it's going to happen, but right now I want it to happen. (6)

Study participants were especially eager to give birth if there were practical concerns that the birth would solve. One participant wanted her husband to be present for the birth and this would not have been possible unless she gave birth before 37 weeks. Another woman

who was visiting from a different country wanted to make travel plans and give notice to her landlord that she would be leaving.

Some study participants expressed disappointment when their preterm labour did not progress because they no longer perceived a risk to the baby. After deciding they were in labour, these women were initially excited that the pregnancy was going to end as they rationalized that the health care professionals had assured them that the baby would be fine after 34 weeks. Disappointment and humiliation followed when they were told that “nothing” had happened. One woman described the disappointment that both she and her partner felt when she thought she was going into labour at 36 weeks gestation and then did not.

I suppose we were a bit disappointed in a mad way because you know, my husband is right there; he'd done his rally car driving that he had always dreamed of doing. Put the old European rally driving into practice. And he was really looking forward to being stopped by the police and saying, “She's pregnant! She's going into labour!” Of course he was just like “Oh! Okay...so it's not coming.” And I was like “Right! Okay, it's not coming.” (20)

A few participants who were not bothered by recurrent preterm labour symptoms were not as eager to get it over with and followed medical advice to continue bed rest until 35 to 36 weeks. One woman reasoned, “I went through so much already, who cares, I'll wait to 36 weeks” (17). Another woman whose cervix was three centimetres dilated and fully effaced followed her doctor's advice and restricted her activity until 37 weeks.

Dr. \_\_\_\_ said the week before when I saw him, “You know what, you can even go shopping. You don't have to stay on bed rest anymore. Just do whatever is comfortable for you.” So that's what I did. I was able to do some cleaning. I did light dusting...just so the day wasn't so long...like before (37 weeks) I used to lie on the couch and look at the ceiling. (3)



By term, all participants were raring to go into labour and, at the first sign, they were exhilarated thinking, "it's finally going to happen," and they had, "no reason to feel like, 'how selfish are you that you want to have this baby early?'" (12).

After 34 weeks gestation or after a period of reduced uterine activity, study participants were discharged from antepartum care at home. Some of the participants found this disconcerting because they no longer had the emotional support to boost their confidence in making a decision about seeking help in a future episode of worrisome symptoms. One participant who had returned to hospital on two occasions after discharge from antepartum care at home felt "it was like the security blanket was gone" (6). Another woman found that after she was discharged from antepartum care at home at 34 weeks, nobody seemed to care any more if she went ahead and gave birth, and there were no professionals to turn to for the empathy she needed to handle ongoing symptoms.

So I think the encouragement, the understanding in the...the recognition that this is a tough thing and you're doing really good. Hang in there...the longer that baby stays in there, the better. Because...you get to that point where everybody's worried until 34 weeks so after that you start to kind of say, "Well, you know it wouldn't be so bad if it happened now" because you're just personally in so much...stress and anxiety. And then you feel bad for feeling that because you know that you really should try to get to 40 or 41 weeks. So then you start to get this guilt thing that happens too, because you want this over and that's probably not the best thing for the baby and, "What a horrible mom you're going to be! Oh, my goodness! Can't you put anybody else first for once?" (12)

No literature was found that explores the psychological consequences of wanting to end a pregnancy early due to recurrent preterm labour symptoms. Although some study participants described guilt associated with selfishness that appeared to dominate their desire to end the pregnancy, this desire was more likely motivated by circumstances that caused

them to doubt their abilities to keep their babies safe. Lederman (1984) found that acceptance of pregnancy was linked to pregnant women's satisfaction with being pregnant, and Rubin (1984) described difficulties women had in acceptance of pregnancy despite being free from complications. Rubin explained, "it is the tipping of the balance in favor of the benefits that a woman bind-in to the pregnancy to sustain, endure, and accommodate to term and through labor" (p.63). The women in this study who endured recurrent preterm labour symptoms, experienced anxiety, uncertainty, helplessness, and humiliation that masked the benefits of continuing their pregnancies and created conflict in accepting their pregnancies. Difficulty in achieving this maternal task may have had repercussions, as it is the binding-in process or acceptance of pregnancy where "unconditional love of a mother for her child originates" (Rubin, p.128).

### ***Trusting Your Gut***

Although "setting a new normal" was intended to reconcile the difference between body knowledge and professional knowledge and prevent further humiliation associated with over-reacting, study participants were quick to clarify that they would never take a risk for their babies. Women in the study had become sensitized to their body knowledge and were aware of their interior sensory perceptions even when they tried to ignore them. Attempting to ignore their body knowledge produced anxiety for these participants because they did not want to take a risk for their babies. As frustrated as they were, if the gestational age was a concern and the baby might have been in danger, they indicated that it was "better safe than sorry" (8).

Most women in the study believed that they would know and seek help when labour was progressing beyond a safe level. One woman suggested that women should disregard guilt for seeking help when they are out of their “comfort zone.”

If you get out of your comfort zone, don't hesitate...just don't hesitate, no matter how many times you think you've been there or how many times you think...because at the back of your mind is always that thing of “Oh, man! I'm a real pain in the butt. These guys must...I must be driving them crazy because I always show up there and nothing ever happens.” So there's that, and I would say, “Just disregard that and if you really feel like you're out of your comfort zone, make the call and go” because there's very little you can do to calm yourself once you've reached that mental point of “I don't feel good about this anymore. (12)

Another woman admitted that she doubted her body knowledge, but said she would have “kind of forced (her) way in to get looked at.”

So part of me would make me think it's in my head but...I don't know...just from everything I've been taught and told I would have had it looked at and checked out...(4)

Many of the women in the study rationalized that it was their right to seek help from professionals and, even if they thought it might have turned out to be “nothing,” they would go to hospital. One woman explained:

The hospital's going to get paid anyway, so why not just go in and get it over with and get it checked and just make sure. It's better to be safe than sorry. (8)

Another study participant who gave birth unexpectedly at home when she was 35 weeks pregnant stressed the importance of trusting and acting on body knowledge without concern for being wrong or inconveniencing professionals. She proposed that professionals should “budget” for “false phone calls that end up being nothing.”

“Okay, if I'm wrong, screw you! I'm wrong.” You need to have that attitude. I'm still...I still have my social, human rights even...like no matter what I do. Like in

Canada, people naturally have that human right, but in other parts of the world, they don't; you just can't take it for granted...They don't have that. They're so concerned about how other people feel...(17)

On the other hand, another woman sensed that if she did not follow advice from hospital professionals about when to return to hospital, an earlier return would not have been well received.

I don't think I would have stopped coming back if I'd felt like I needed to come back. But...I mean, I don't think that's very well received either. Had I walked in and they said, "we told you to come back when your water broke, well it's not broken," nobody would have said, "But good for you for listening to your instincts." That wouldn't have been their response...I don't think. It would have been "Now go home and do as you were told." (16)

Several women in the study credited antepartum care at home for increasing their confidence in seeking help if they were uncertain about what was happening in their body. One woman recalled, "they did always tell me 'if you're not sure, go in. If you don't feel comfortable, go in'"(6). These women felt supported by the antepartum care at home nurses when they had decided to go to hospital, as one participant stated:

And then she'd asked me what I wanted to do at one point and I said, "Well, I would feel more comfortable going into the hospital...just because this is a change...I don't know quite what to make of the change." And she said, "Well, in that case come on down." (2)

Generally, study participants believed that "you know your body better than anyone else" (8), and that other women who experience recurrent episodes of preterm labour symptoms will make the right decisions in seeking help. However, when study participants adjusted their symptom baselines to disregard previous symptoms that did not change their cervixes according to professional assessment, their new level of "normal" had the potential to be set at an unsafe level and progress to birth rapidly. This was the case for a multiparous

participant who gave birth unexpectedly in her home. Though restless and unable to sleep for more than two hours, she did not recognize a change from her baseline symptoms until 40 minutes before the baby was born. This woman warned, “you could be so different, that you make it out of the norm, even for your doctor who has delivered tons of babies already” (17). Another woman emphasized that despite self-doubt, it was important to continue to trust her body knowledge.

That’s why it’s so important to trust your gut and not set those stupid extreme bars for yourself, and just continue to listen. Even though what they see doesn’t match what you’ve felt, you’ve just got to keep on with that because I think I got to the point where I almost didn’t trust myself anymore. (12)

As in the current study, Rubin (1984) found that returning to hospital for a subsequent episode of labour symptoms was prompted by concern for the baby. Concern for the baby surpassed the fear of repeating the humiliating experience of seeking help when no measurable cervical changes were found. Although the women in this study set a “new normal” to avoid humiliation from appearing to over-react, even as they did this, they believed in their hearts that they would definitely seek help if they perceived their babies to be at risk.

Jaggar (1989) offered a feminist perspective of the construction of knowledge that integrates all human faculties. Rather than reducing emotion to an irrational, instinctive response to situations, Jaggar proposed that emotion is a “conceptual abstraction from a complex process of human activity that also involves acting, sensing, and evaluating” (p.165). The intentionality of emotion that Jaggar proposed corresponds to the keen sense of body knowledge that women in this study developed through their self-assessments, comparisons of changes in interior sensations to their symptom baselines, and the decisions

they made to seek help or to wait at home. To be helpful to these women, this type of “gut level” knowledge required that they trusted that what they felt was worthy of guiding their actions through an episode of preterm labour symptoms.

### *Restarting the Process*

When study participants had reconciled body knowledge and professional knowledge by “setting a new normal,” they remained aware of their preterm labour symptoms that had prompted them to return to the hospital in the previous episode. These women continued to rely on their body knowledge to appraise symptoms and they did not resort to lay consultation that they believed was inferior to their personal knowledge. Although they attempted to ignore symptoms that they had included in their “new normal,” they could not “unlearn” their body knowledge, and this influenced their experience of “knowing something’s not right.” Initial confidence in their body knowledge faded and the antepartum guidelines were no longer used to help them in making their decisions. These women were able to identify the onset of labour as a “sudden change,” but they waited longer and they experienced anxiety related to their uncertainty in deciding when to seek help. This anxiety originated in the tension between not wanting to take a risk for the baby versus not wanting to over-react.

Most study participants tried to ignore symptoms that were part of their “new normal” in a similar way that they ignored symptoms that were included in their baselines of nonproblematic symptoms prior to their first return to hospital. Because the recurring symptoms were beyond the antepartum help-seeking recommendations, waiting produced anxiety as they wondered if they were waiting too long. However, self-management strategies comforted some of these women until symptoms subsided. One study participant

tried to “tune it out” while she accepted that this was her reality and she could choose her response to it.

Just try to distract yourself from it, try to do some of the breathing stuff and...I think it's mostly just recognizing that this is just the deal. And you can't choose whether you're going to be in pain or not, but you can choose how you react to it. You can react negatively or you can just find a way to cope with it. And so, you just kind of...I don't know. Try to focus on other things I guess and focus on the outcome and all that kind of stuff. (12)

A few study participants described their atypical behaviour in the hours prior to seeking help. One participant who was pregnant with her fourth baby, had reached a gestational age of 30 weeks with prolonged ruptured membranes when she followed the antepartum care at home guidelines to help her decide to return to the hospital for labour symptoms. She was then sent home because her cervix was long and closed, but she continued to experience symptoms. While her cervix dilated to eight centimetres in the next two hours at home, she explained that she was unable to rest and needed to fold laundry and clean house even though she had been on bedrest for the week prior. She called this a “burst of energy”(13).

Two other study participants could not say for certain if they were in labour or not during the hours before they sought help, despite having experienced a previous episode of preterm labour for which they sought help. Their descriptions of their symptoms resembled subtle preterm labour symptoms, but they did not attribute them to labour. One participant, who frequently experienced preterm labour symptoms and vaginal bleeding, presented at her doctor's office four centimetres dilated at 36 weeks. This woman also described obsessive cleaning and tidying behaviour over the two previous days. She explained that the unique

symptom to this episode was her inability to relax, which she explained was, “like anxiety,” but she had difficulty describing what symptoms prevented her from being comfortable.

Well, I think part of it was...just the...I couldn't...my stomach you know...like my back was hurting and...I couldn't get into a position that was comfortable, so I was constantly flipping back and forth and thought 'Forget it. I'll get up.' And went to the living room and did some things and...so it was just...I just couldn't feel...right, I guess. (4)

Another participant suggested that she was in “denial” when she could not sleep because she was uncomfortable. She busied herself with reading annual reports “that would drain (her) energy really quick” for more than two hours before she acknowledged that she was having contractions rather than “tightenings.” Approximately one hour later she gave birth at home.

...so I was thinking late, like 12:00, and then I was uncomfortable, I couldn't sleep. So I started looking at some annual reports of some stock things; like it's not a stressful thing to me, I just want to do something so that...until I'm comfortable. So start at 12:00 (a.m.). I was trying to find things to do because I don't really have contractions...like I may have like...my husband said if I have contraction at night I'll call it tightening. I have a few odd tightenings here and there, right, but that's really not that unusual so...but it's really infrequent, right. But I was uncomfortable; I was not able to sleep even at 12:00 ...(17)

In contrast to the behaviour that these study participants described, other women in the study did not notice any peculiar feelings or behaviour prior to the onset of labour. When women in the study had reached full term or they had not experienced recurrent episodes of preterm labour they did not report any anxiety related behaviour. One woman who had been free from preterm labour symptoms after her cervix had dilated to three centimetres at 29 weeks gestation described a typical day prior to spontaneous rupture of her membranes at term.



Nothing unusual. Just discomfort when I was walking...because everything was...I guess everything was pushed down and maybe because her head was a little too low, making it really uncomfortable for me to walk. Nothing unusual. No change in that. Contractions...I was getting, like two, when I counted sometimes, or three. (3)

Parallel to the reports of women in earlier studies who hesitated to seek help because they feared the humiliation of a "false alarm" (Patterson et al., 1992; Weiss et al., 2002), the women in this study who experienced recurrent episodes of preterm labour also feared the embarrassment associated with appearing to over-react. For these women, their perception of threat was altered based on professional knowledge in a previous hospital encounter. Therefore, they waited for longer periods in subsequent episodes for their symptoms to stop or escalate beyond their "new normal." As in the previous studies, the women in this study delayed help-seeking and managed symptoms by trying to ignore them. The difference for study participants was that they had learned to become more sensitive to their body knowledge and it was difficult to ignore.

When women in the current study tried to ignore their body knowledge while they waited for their symptoms to exceed their "new normal," they described feeling anxious as they struggled between not wanting to take a risk for their babies and not wanting to over-react. Reva Rubin (1984) observed similar anxiety related maternal behaviour at term to behaviour described by these study participants. Rubin explained that when a woman attempts to distract herself from fearful thoughts for the baby and for herself she is unable to relax, and often manages her anxiety by preparing the home for the arrival of the baby. Like the women that Rubin observed, several participants described an abundance of energy to meet their need to clean and "have everything in its place." It is only when these women experienced a new symptom or perceived that previous symptoms exceeded the level where

there were no measurable cervical changes on a previous exam that they went to the hospital to “see what was going on.”

Jaggar (1989) called attention to western norms that devalue emotional responses and encourage individuals to suppress and control their emotions. This often reduces a person’s awareness of body knowledge and leads to denial of their emotional state to themselves and to others. It is possible that this same influence contributed to the suppression of body knowledge by the women in this study who did not recognize that they were in labour even though they had been aware of previous episodes of preterm labour. Women in the study believed that they would “trust their gut,” but in a few situations, study participants did not respond to “their gut” and they did not “know something’s not right.” This had potential to lead to adverse maternal and newborn outcomes.

### ***The Process of Reconciliation***

The core psychosocial process of reconciliation between body knowledge and professional knowledge produced enormous anxiety for the women in this study who experienced recurrent preterm labour symptoms. With potential for this process to repeat, the overriding tension between not wanting to take a risk for the baby versus not wanting to over-react was emotionally exhausting for these women as they attempted to reconcile the differences between their interior experiences and what they had been told was happening in their bodies by professionals. This process cannot be understood in isolation from the social context in which it occurs. Rationalist assumptions and values inherent in western society influenced how the women in this study perceived the need to reconcile the difference between the two types of knowledge. Rather than appreciating the benefits of their body knowledge in helping them to recognize another episode of labour, these women lost faith in

their body knowledge and adapted their interior sensitivity to coincide with professional knowledge.

Since the time of the earliest philosophers, reason, above emotion, has been credited with the origin of superior knowledge (Jaggar, 1989). Feminist theorists have described many dualistic epistemological relationships that have been accepted in western society. To name a few, knowledge has been equated with truth, wisdom, reason, mind, seeing, and male, whereas ignorance has been linked to emotion, feeling, responding, body, listening, and female (Jaggar & Bordo, 1987). In addition to their high regard for reason and logic that was socially instilled from childhood, the women in this study were also more vulnerable to the power of professional knowledge, which claims to incorporate the essence of rational knowledge.

Professional knowledge embraces the power and control related to privileged knowledge and discourse to which only professionals have access (Foucault, 2000). In his historical account of the construction of medical knowledge, Foucault (1973) explained how a professional monopoly over health care knowledge has secured the power and control over those who receive health care. In this study, when professional knowledge did not correspond with body knowledge, study participants relied on professional knowledge while adapting their baselines of nonthreatening symptoms. Women in the study felt that they had no control over their situation because they did not have access to the specialized knowledge that seemed to have the authority to declare what was happening.

A large part of professional knowledge involves disembodiment of the patient (Duden, 1993; Young, 1997). This is a process of separating the "self" of the patient from the findings of investigations that provide visible proof of "what is" with disregard for their

corporeal experiences. Disembodiment of the patient allows health care professionals to objectively assess the presenting problems without the confounding influences of emotion. Jaggar (1989) proposes that the notion of a "dispassionate observer" is a myth because all observers are influenced by their own emotions, and observations rely on the observer to decide which observations to make. Nevertheless, the claim of neutrality and interpretation of "objective" test results served to discredit the subjective testimonies of women in this study. When faced with measurable proof that their judgements in seeking help had been "false," the women in this study felt humiliated and internalized their "error" as a personal flaw. Rubin (1984) described the quest for knowledge, and the high value placed on recognition for knowing, as one of the fundamentals of an ideal adult self image. As reported by the women in the current study, Rubin found that when failure to know is discovered in public, women experience "embarrassment, shame, and humiliation" related to "self-depreciation" (p.15).

These women then demonstrated predictable behaviour based on the characteristics of human agency (Bandura, 2001). Bandura associated characteristics of human agency within sociostructural influences that determine how a person decides to act in a given situation. Combined beliefs about self-efficacy, forethought with respect to effects and consequences of certain actions, and an appraisal of sociostructural influences, shape how people regulate their behaviour. Bandura emphasized that people adapt their behaviour purposively in relation to their appraisal of the events they encounter, and that people will not be motivated to carry out behaviours if they do not believe they have the power to achieve their desired goals through those behaviours. Initial certainty and positive perception of self-efficacy in correctly appraising symptoms, was shattered as the women in the study succumbed to the

power of professional knowledge over their body knowledge. Without additional information to alter decision-making and to give meaning to their experiences, these women were resigned to reconcile body knowledge and professional knowledge by setting a “new normal.” Inner conflict between fear for the baby and fear of embarrassment escalated and contributed to anxiety and uncertainty in deciding when to seek help for future episodes of labour symptoms.

Previous researchers (Coster-Schulz & Mackey, 1998; Mackey & Coster-Schulz, 1992; Patterson et al., 1992; Weiss et al., 2002) identified a delay in help-seeking behaviour that resulted from uncertainty in symptom recognition by women experiencing a first episode of preterm labour. Weiss and colleagues found that a process of resolving the uncertainty of preterm labour symptoms matched Mishel’s (1988) theory of Uncertainty in Illness. These authors recommended decision guides and easy access to health care professionals to assist with self-management and to reduce the uncertainty related to symptom recognition and help-seeking.

Women in this study who had received antepartum care at home initially sought help promptly, with certainty and confidence in their appraisal of preterm labour symptoms. This suggests that the stimuli frame of Mishel’s (1988) theory including, symptom pattern, event familiarity, and event congruency, was positively influenced by antepartum care at home. Although the nature of preterm labour lacks a symptom pattern, women were able to gauge their responses to an individual baseline pattern in comparison to their first episode of preterm labour. Structure for interpreting symptoms and guidelines of when to seek help reduced their uncertainty.

It was not until after they had accessed the health care system for another episode of labour that their beliefs in self-efficacy diminished and they experienced humiliation and uncertainty related to making future decisions to seek help. Mishel (1988) described "credible authority," another structure-providing element that positively influences uncertainty in illness, as "the degree of trust and confidence patients have in the health care providers" (p.228). She suggested that credible information reduces uncertainty for those who lack confidence in their interpretation of symptoms by strengthening the stimuli frame as information related to the condition and symptom meaning is provided.

Women in this study sought confirmation of their symptom appraisal from professionals, who they perceived as credible authority, but they had been confident in their body knowledge prior to seeking help. Unlike other patients who are not confident in symptom appraisal, when these women interacted with a credible authority and found that their body knowledge did not correspond to professional knowledge, uncertainty increased. For these women, uncertainty was not related to symptom appraisal. Their uncertainty was related to the potential outcome for their babies if they delayed help-seeking while being aware of symptoms for which they had been taught to seek help and to their potential embarrassment if they returned to hospital again when they were not in labour.

Mishel (1988) described three perceptual responses to an uncertain event, including not recognizing the event, recognizing the event but not classifying it, and recognizing the event and classifying it incorrectly. The process for appraisal of an uncertain situation determines whether a person will perceive the situation as a danger and mobilize coping strategies, or as an opportunity where no immediate attention is required. Despite uncertainty, most of the study participants made their decisions to return to hospital

appropriately, however, there was potential for two study participants to experience poor outcomes. One woman, who gave birth at home, recognized her restlessness, but did not classify it as labour until it was too late to go to hospital. Another woman left the hospital when she trusted professional assessment that her labour was not active. She then progressed to eight centimetres dilation in the next two hours. In these situations, reconciliation was a process that had the potential for negative outcomes when these women relied on professional knowledge to set their "new normal" and they stopped "trusting their gut."

### *Additional Findings*

Although most study participants were fed up and "wanted to get it over with," their labours did not progress without medical help. Apart from one woman who gave birth unexpectedly at home when she was 35 weeks, eleven of the twelve participants underwent medical intervention to achieve the birth of their babies. Either their labours were augmented or induced with oxytocin, or their membranes were artificially ruptured because the cervix had dilated and they were no longer having contractions. Two study participants underwent elective caesarean sections at term. In one surprising case where oxytocin augmentation was required, a multiparous woman at 30 weeks gestation dilated to eight centimetres in a two-hour period while in her home. In hospital she was still eight centimetres dilated five hours later. A minimal dose of intravenous oxytocin started her labour again and the baby was born within 30 minutes. Another woman, who had previously given birth vaginally to a baby that weighed over 3600 grams, did not dilate past two centimetres when she was in active labour at 35 weeks. Despite the use of oxytocin to augment her labour, her cervix remained two centimetres dilated 14 hours later when a cesarean section was performed.

Need for medical intervention to deliver or accelerate labour for eleven of the twelve participants in the current study was an unexpected finding. With a small purposively selected sample, these findings are considered coincidental. However, there is literature that addresses the relationship between maternal stress and anxiety and inhibition of labour that may serve as a framework for future inquiry. Reva Rubin (1984) believed that there is no such thing as false labour. She observed that women start and stop labour many times in the last month of pregnancy and alluded to cognitive control over labour. When a woman fears the birthing process or giving birth to an immature baby, or if she feels rejected or exhausted, she will "hold on" (p.58) and labour will not progress. Rubin recognized that the uterus is not controlled voluntarily, but she suggested that it responds to "involuntary inputs of the reticular system and limbic or survival system of the brain" (p.92).

Maternal anxiety and increased stress-related biochemicals have been associated with slow progress in the active first stage of labour (Lederman, Lederman, Work, & McCann, 1978). In 32 primigravid women with normal pregnancies, Lederman et al. found that self-reported anxiety was significantly correlated with elevated serum epinephrine levels. Higher epinephrine levels were significantly associated with slower progress in the active phase of labour (3 to 10 centimetres). The authors extended their work to explore the relationships between specific psychological factors in pregnancy and progress in labour, and found that conflict surrounding acceptance of pregnancy showed the most significant correlations with increased anxiety and epinephrine, reduced uterine contractile activity, and longer length of labour (Lederman, Lederman, Work, & McCann, 1979). Acceptance of pregnancy referred to women's adaptive responses to physical changes in pregnancy and to fears about labour related to helplessness, pain, loss of control, and loss of self-esteem.



As early as 1963, it was hypothesized that maternal anxiety during pregnancy had a negative impact on childrearing and early childhood development (Davids, Holden, & Gray, 1963). More recently, higher rates of behavioural and emotional problems in children have been linked to increased anxiety experienced by their mothers in late pregnancy (O'Connor, Heron, Golding, & Glover, 2003). In this longitudinal study, maternal anxiety was measured at repeated intervals during pregnancy ( $n = 10,211$ ), and parents reported on their childrens' behaviour at 47 months (76 percent retention) and at 81 months (69 percent retention). Findings suggested that high maternal anxiety was associated with behavioural problems that were identified at two years of age and persisted when these children were almost seven years old. The women in the current study reported that they suffered from anxiety related to uncertainty in making decisions about when to seek help, but this type of anxiety and the effects that it might have on the fetus and on maternal-infant relationships has not been measured.

### *Summary*

The core category, reconciling body knowledge and professional knowledge, was described to explain how the women in this study who had received antepartum care at home for preterm labour decided that their symptoms represented a subsequent episode of preterm labour and how they decided whether or not to seek help. The process began with women in the study using their body knowledge to compare new or different preterm labour symptoms with their established baselines of nonthreatening symptoms. The first episode of preterm labour symptoms after receiving antepartum care at home was appraised with certainty and help-seeking was prompt as these women followed antepartum care at home guidelines. When body knowledge was consistent with professional knowledge, women in the study

remained in hospital and reconciliation was unnecessary. When body knowledge did not correspond with professional knowledge, study participants reconciled body knowledge and professional knowledge to appraise all future episodes of preterm labour symptoms.

Throughout this process, study participants struggled with an overriding tension between not wanting to take a risk for the baby versus not wanting to appear to have over-reacted. The tension created uncertainty related to making their decisions to return to the hospital or to wait for longer at home, and study participants reported that this uncertainty produced anxiety. Women in the study set their “new normal” based on professional knowledge, but they were not able to completely disregard their interior perceptions and they were aware that their new levels of “normal” surpassed the help-seeking guidelines. Body knowledge continued to guide their decisions to return to the hospital, but their uncertainty and desire to avoid another humiliating experience of appearing to over-react, influenced them to wait longer at home.

Reconciling body knowledge and professional knowledge prevented some study participants from returning to hospital unnecessarily, but the process had potential to contribute to poor outcomes for two of the twelve study participants and their babies. Existing literature was explored to provide greater understanding of the power and control that professional knowledge exerted over these women to force them to reconcile their body knowledge with professional knowledge. The women in the study were willing to polish their assessment skills, develop a keen awareness of their body knowledge, and follow help-seeking guidelines. They were not, however, willing to repeat the humiliation related to being found “wrong” by professionals. The anxiety that these women endured while being responsible for making the correct decision about whether or not to return to hospital for

future episodes of symptoms is worthy of professional attention. Implications for nursing will be discussed in Chapter Four as they relate to nursing practice, education, and research.

## CHAPTER 4

### Recommendations for Nursing and Conclusion

#### *Introduction*

The purpose of this study was to describe the decision-making process in identifying and responding to a subsequent episode of preterm labour by women who have received antepartum care at home for preterm labour prior to 34 weeks gestation. The substantive theory of Reconciling Body Knowledge and Professional Knowledge gives direction to professionals who are in the position to influence decision-making regarding labour identification and help-seeking behaviour and to provide supportive care for women who experience recurrent preterm labour. Most study participants found that establishing a baseline of nonthreatening symptoms based on professional assessment while receiving antepartum care at home reduced anxiety and uncertainty about symptom appraisal in the next episode of labour. However, when these women sought help and body knowledge did not correspond with professional knowledge, reconciliation was used as a deliberate strategy intended to prevent humiliation related to seeking help for their future episodes.

The process of reconciling body knowledge and professional knowledge was anxiety provoking for these women because they were responsible for protecting their babies, yet did not have access to information that could accurately measure their progress in labour or assure protection. Awareness of the vulnerable position in which women who experience recurrent preterm labour symptoms at home find themselves is integral to addressing their emotional needs and providing supportive care. As health care programs move to the community and women are expected to take responsibility for decision-making with respect to help-seeking, professionals are obligated to encourage women to trust their body

knowledge and feel believed. When women do not feel believed there is potential for negative outcomes for themselves and their babies. Nursing interventions should be geared to reducing anxiety and reinforcing beliefs in self-efficacy.

### *Implications for Nursing Practice*

Medical tools used to measure and visualize the internal status of women's bodies are part of the reality of modern obstetrical care. Improvements in technology have given professionals more sophisticated means to predict whether preterm labour symptoms are likely to progress to birth. At this time, however, scientific test results cannot provide a complete representation of what is occurring for women, yet they provide concrete evidence that has potential to discredit women's cognitive and body knowledge. In supporting women, nurses need not deny the value of scientific technology in contributing to diagnostic impressions. Rather, nurses can support women by validating their body knowledge and using it to complement professional knowledge.

Women are excluded from knowing what is happening in their bodies when professional discourse accepts objective evidence as absolute truth. Study findings showed that women were prepared to doubt their experiences rather than challenge the authority of professional knowledge. Nurses, especially those working in the triage area of a birthing unit, can include women as a vital source of knowledge by recognizing that professionals do not have access to women's internal experiences and are in no position to judge their merit. Women should be commended in a sincere manner for trusting their body knowledge. By disclosing what professionals do not know and admitting the absence of an exact science to determine symptom meaning, women are more likely to believe that their input is valuable.

Rather than focusing on only objective data that imply “falseness” of the experience, the truth of women’s body knowledge must be respected.

Study participants who received antepartum care at home used self-assessment education and help-seeking guidelines effectively for the next episode of preterm labour; however, study findings draw attention to prolonged hesitancy in seeking help for subsequent episodes while women waited for a greater intensity of the same symptom or a new symptom to appear. Waiting until symptom intensity exceeded the “new normal” was a protective mechanism intended to avoid the risk of misreading body cues and feeling humiliated. Regardless of investigation results, women would benefit from positive reinforcement given by nurses for seeking help. Projecting genuine belief that women return to hospital because it is indicated and showing admiration for vigilance in self-monitoring symptoms to protect the unborn child would reinforce safe behaviour and maintain women’s beliefs in self-efficacy. Women do not have access to professional knowledge from their homes and it is, therefore, essential that they trust their body knowledge when they are responsible for deciding if symptoms warrant return to hospital for further assessment.

Rather than using professional knowledge and power to minimize women’s experiences, discourse can be altered by nurses to validate their experiences and discourage them from “setting a new normal” too high. Medical jargon and demeaning terms, such as “false labour,” or normalizing labels for contractions, such as “tightenings,” should be avoided. Study results showed that preterm labour contractions that did not change the cervix were often perceived at a similar intensity as contractions experienced during progressive labour. As recommended in previous literature (Freda, 2003), contractions should be called contractions to avoid confusion and the implication that women’s interpretations of their

experiences are "false." Difficulty in knowing when labour will progress to birth, for professionals and for women, should be made apparent. Nurses can explain how labour often starts and stops, and that professionals may expect women to return to hospital several times to rule out progressive labour.

Prolonged anxiety experienced by women in the study contributed to a negative account of their pregnancy and "wanting to get it over with." Once discharged from antepartum care at home, women felt that health care providers did not understand their experiences, and after 34 weeks, professionals did not seem concerned whether or not they gave birth. Medical intervention to prolong pregnancy for the baby's benefit is not indicated beyond 34 weeks gestation; however, the fetus is not the only patient that deserves care. Services that provide beneficial nursing support to prevent maternal anxiety ought to continue on behalf of women, despite the assumption that there will be a good outcome for the baby. Women who experience persistent symptoms of labour without measurable cervical changes may benefit from continued antepartum care at home beyond 34 weeks. In view of the recent research linking antenatal maternal anxiety to negative long-term behavioural and emotional outcomes for the child, extending the service beyond 34 weeks may also benefit the child.

On the other hand, the results of this study underscore the importance of all health care providers to demonstrate genuine empathy and provide emotional support to this group of women. Since there are more nurses than professionals from other disciplines who will come in contact with women who experience recurrent preterm labour, nurses have a strong influence on how these women will perceive the care they receive. Nurses should not only model supportive care for these women, but should also educate professionals from other

disciplines who provide care to them. However, provision of appropriate emotional support depends on nursing education to ensure effective communication skills and awareness of women's experiences of recurrent episodes of labour.

### *Implications for Nursing Education*

Study findings highlight the critical role that nurses could play in providing emotional support and empathy to women who experience recurrent preterm labour symptoms, yet a consistent venue for educating nurses in this regard is presently lacking. Undergraduate nursing programs introduce students to obstetrical nursing, but there is insufficient time in these programs to include high-risk pregnancy complications. To practice in a birthing unit, nurses are usually required to complete a perinatal specialty course that focuses on uncomplicated childbirth in a hospital setting where a medical model is dominant. Further high-risk antepartum nursing education is usually provided within individual institutions, and the nursing educator determines the content that is taught. It is vital that obstetrical nursing educators at all levels are aware of both medical and nursing literature pertaining to preterm labour. Knowledge about the psychosocial processes dominant in identifying and responding to an episode of preterm labour can help nursing educators correct misconceptions. The literature should be used to inform nurses who work directly with women who experience recurrent preterm labour symptoms to promote therapeutic interactions that support women's body knowledge.

Undergraduate nursing programs include education related to communication skills and provision of emotional support to clients. Unfortunately, novice nurses learn to adapt to hospital culture by imitating the practices and adopting the attitudes of senior nurses, and they blend into the institution of privileged knowledge that holds professional power over



patients (personal experience). Nursing schools can foster a greater commitment to therapeutic communication skills that benefit childbearing women by analyzing professional – client interactions common in birthing units. While student nurses have the time and support to reflect critically on how professional behaviour and discourse affects women's experiences in childbirth, they will become more aware of ways they can help support women. Practices that disembody and disempower women should be brought to the attention of student nurses and they should be guided in developing strategies to advocate for women. Student nurses need to be more familiar with nursing and midwifery research that describes the experiences of women in childbirth. As students learn the medical approach to childbirth, including stages of labour and "normal" progress, they should also learn how professionally defined parameters of "normal" restrict the validity of women's experiences.

Rather than an emphasis on physical science theory in undergraduate programs, student nurses would benefit from social science theory, such as social cognitive theory (Bandura, 1997), to learn what factors influence people to regulate and carry out health promoting behaviours. This study showed that antepartum care at home nursing support and care protocols facilitated a high degree of participation and confidence in self-assessment and help-seeking behaviour on the first occasion that study participants returned to hospital. Prolonged hesitancy in seeking help on the next episode of labour suggests that guidelines are effective only when health care providers comprehend the impact that their actions and comments have on women who experience recurrent preterm labour symptoms.

Front line nurses often accept current nursing practice as standard care and do not question the usefulness or consequences of habitual professional behaviour. Educators are obliged to bring issues that affect women's health to their attention to raise the standard of

care on behalf of women requiring nursing services. Educators need to challenge the blind acceptance of professional discourse that minimizes women's experiences. For example, reflecting on the rationale for using the label "false labour" may bring nurses to the realization that it is a professional idiom created for the convenience of segregating women who warrant professional attention from those who could go home. Nurses must become more aware of how such terms affect pregnant women who want to be credited with knowing their bodies.

Nurses caring for women who experience preterm labour must understand the unreliability of technology in predicting which contractions will progress to childbirth. The unpredictable nature of preterm labour should be emphasized, and gaps in knowledge made clear to nurses who can then explain to women the value of their body knowledge. When test results conflict with women's experiences, rather than simply doubting women's testimonies of what they are experiencing, accuracy of test results should also be questioned.

To provide appropriate emotional support, nurses must be taught that women have faith in and rely on professional knowledge to validate their experiences. Qualitative findings from this study and previous studies should be used to help nurses gain an understanding of the anxiety women experience in identifying preterm labour. Nurses need to be aware of how women struggle with their responsibility in deciding whether or not to seek help, risking humiliation related to misinterpreting body cues while worrying about safety for their child.

### ***Implications for Nursing Research***

Conclusions from previous research acknowledged the difficulty in identifying preterm labour symptoms that will progress to active labour and emphasized the importance of encouraging women to seek professional help to verify symptom meaning (Weiss et al.,

2002). It is apparent from the findings of this study that these women suffered emotionally when they identified and sought help for a subsequent episode of labour if significant changes were not verified on professional assessment. Future episodes were assessed with self-doubt and a delay in help-seeking to avoid repetition of the humiliating experience. Further research is required to inform nursing practice in the effectiveness of strategies to support women when they experience recurrent preterm labour symptoms. The findings from the current study could also form the theoretical basis for inquiry into the experiences of women with other health problems when their body knowledge is ignored or devalued.

Study participants who experienced recurrent preterm labour symptoms without cervical changes expressed a desire for more information about their condition. Professional explanations of what had occurred did not coincide with their experiences, and health care pamphlets were inadequate in guiding decision making about seeking help for the next episode of labour. Women expected health care providers to know and answer questions about their condition and they reported frustration when this did not happen. Quantitative descriptive research is indicated to learn more about the nature of preterm labour that does not result in progressive cervical dilation. For example, it is not known how often preterm labour symptoms progress to birth when the cervix is less than three centimetres dilated and the fetal fibronectin test is positive or the cervix is shortened on endovaginal scan. Gestational age at birth has not been analyzed separately for women who experience recurrent episodes of preterm labour compared to those who experience only one episode of preterm labour. There is little known about patterns of preterm labour symptoms that do, and do not, result in cervical dilation or what causes preterm labour to start and stop. Fetal effects resulting from weeks of frequent uterine contractions without cervical dilation has not been

investigated. This information has potential to help women recognize that they are not alone in their experiences, to believe that professionals appreciate the reality of their symptoms, and to understand the possible outcomes related to their condition.

Although the findings of this study are not generalizable to other populations, the coincidence that eleven of twelve study participants required medical intervention to assist in achieving the birth of their babies is startling. Further quantitative research exploring the occurrence of this phenomenon in a much larger sample of women who experience recurrent preterm labour symptoms would be valuable. Lederman's (1984; Lederman et al., 1978, 1979) research that links high anxiety and epinephrine levels to slow progress in labour, and Reva Rubin's (1984) theoretical perspectives on cognitive control of labour, provide a conceptual framework for further inquiry into this observation. A randomized controlled trial could be undertaken to compare anxiety level, biochemical markers of stress, progress of labour, and the use of medical intervention in the birthing process for women who do not receive antepartum care at home despite preterm labour symptoms, compared to women who receive antepartum care at home until 34 weeks and to women who receive antepartum care at home until the birth of their babies. This research should include follow-up of the behavioural and emotional development of the offspring of these women. This type of research would be useful to evaluate if there are benefits of antepartum care at home nursing support related to maternal stress level and how this relates to the requirement for intervention in the birthing process and to long-term outcomes for the child.

Women in this study who experienced recurrent preterm labour symptoms without cervical changes were heavily influenced by interactions with health care providers. A qualitative study exploring the attitudes and beliefs of professionals toward women who

return to hospital for recurrent preterm labour symptoms would help clarify the motivation behind professional behaviour when caring for these women. Nursing educators could then use this research to encourage reflective nursing practice when caring for women who experience recurrent preterm labour.

### *Conclusion*

This thesis has provided a description of how study participants who had received antepartum care at home and experienced subsequent episodes of preterm labour symptoms decided if their symptoms represented labour and whether or not to seek professional help. In combination with their body knowledge, these women used self-assessment education and help-seeking guidelines from antepartum care at home with confidence when identifying a change in symptoms compared to their baselines of nonthreatening symptoms and they sought help promptly. When professionals attributed their symptoms to normal variations of pregnancy, women in the study hesitated to seek assistance for future episodes of preterm labour symptoms. They reset their new baselines of nonthreatening symptoms to a higher "normal" as they reconciled body knowledge and professional knowledge. This process was an intentional strategy to adapt to the incongruence between their internal experiences and professional findings and to avoid the humiliation related to feeling inadequate in their body knowledge.

Study participants experienced significant anxiety related to newly created uncertainty that originated in their struggle with an overriding tension of not wanting to take a risk for the baby while not wanting to appear to over-react. Nurses must recognize this emotional vulnerability and provide empathy, encouragement, and accurate information that will support women in similar situations and will build their confidence in body knowledge.

The results of this study indicated that when professionals did not attend to body knowledge in a serious manner, study participants suppressed, and even ignored it, in future episodes of symptoms. This led to a delay in seeking help and had potential to result in adverse outcomes for these women and their babies. These findings do not imply that medical management should abandon scientific technology and objective testing to rely solely on body knowledge. Just as professional knowledge did not accurately predict the outcome for some of the participants in this study, body knowledge was also misleading for some of these women. Rather, professionals must demonstrate respect for both body knowledge and professional knowledge instead of assuming that one way of knowing is superior to the other. Reliance on one type of knowledge with disregard for the other hinders our ability to understand what is actually occurring because only part of the picture is assessed. A combination of body knowledge and professional knowledge produces more reliable knowledge.

To provide adequate emotional support, nurses need to be educated to gain a better understanding of the factors that influence women in their decisions with respect to labour identification and help-seeking behaviours. Nursing education at all levels, including degree programs, perinatal specialty courses, and ongoing clinical education, must give emphasis to the emotional impact that professional knowledge has on childbearing women. Nurses are well positioned to take a leading role in educating other professionals by modeling supportive care and validating women's experiences.

To provide appropriate information to women about their condition, nurses need to be educated with respect to what is known and what is not known about recurrent preterm labour symptoms. When professionals have not evaluated the literature carefully, new technological investigations are often adopted with enthusiasm and unwarranted faith in their

ability to predict preterm birth. Nurses need to clarify the uncertainty of these tests for women. Nurses should also reassure women when birth is not imminent despite the presence of preterm labour symptoms that cannot be explained with our present level of knowledge.

Gaps in present knowledge imply that further research is necessary to provide women who experience recurrent preterm labour with information about what to expect. As long as professionals do not have that knowledge, they should not pretend to know by minimizing women's experiences that they do not understand. Further research is indicated to improve therapeutic relationships with these women where both body knowledge and professional knowledge are used to inform professional practice.

## References

- Abrahams, C., & Katz, M. (2002). A perspective on the diagnosis of preterm labor. *Journal of Perinatal & Neonatal Nursing*, 16(1), 1-11.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman and Company.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Beck, C. T. (1993). Qualitative research: The evaluation of its credibility, fittingness, and auditability. *Western Journal of Nursing Research*, 15, 263-266.
- British Columbia Women's Hospital. (1995). *Admission criteria for preterm labour*. Unpublished manuscript, Vancouver, BC.
- Charmaz, K. (2002). Qualitative interviewing and grounded theory analysis. In J. F. Gubrium & J. A. Holstein (Eds.), *Handbook of interview research* (pp. 675-694). Thousand Oaks: Sage.
- Chiovitti, R., & Piran, N. (2003). Rigour and grounded theory research. *Journal of Advanced Nursing*, 44(4), 427-435.
- Collaborative group on preterm birth prevention. (1993). Multicenter randomized, controlled trial of a preterm birth prevention program. *American Journal of Obstetrics and Gynecology*, 169(2), 352-366.
- Coster-Schulz, M. A., & Mackey, M. C. (1998). The preterm labor experience: A balancing act. *Clinical Nursing Research*, 7(4), 335-362.
- Cunningham, F. G., Grant, N. F., Leveno, K. J., Gilstrap, L. C., Hauth, J. C., & Wenstrom, K. B. (2001). *Williams obstetrics* (21st ed.). New York: McGraw-Hill.
- Davids, A., Holden, R., & Gray, G. (1963). Maternal anxiety during pregnancy and adequacy of mother and child adjustment eight months following childbirth. *Child Development*, 34, 993-1002.
- Devoe, L., & Ware, D. (2000). Home Uterine Activity Monitoring: A Critical Review [Clinical Problem Of Preterm Labor]. *Clinical Obstetrics and Gynecology*, Volume 43((4)), pp 778-786.
- Duden, B. (1993). *Disembodying women: Perspectives on pregnancy and the unborn* (L. Hoinacki, Trans.). Cambridge: Harvard University.



- Dyson, D. C., Danbe, K. H., Bamber, J. A., Crites, Y. M., Field, D. R., Maier, J. A., Newman, L. A., Ray, D. A., Walton, D. L., & Armstrong, M. A. (1998). Monitoring women at risk for preterm labor. *New England Journal of Medicine*, 338(1), 15-19.
- Enkin, M., Keirse, M. J. N. C., Neilson, J., Crowth, C., Duley, L., Hadnett, E., & Hofmeyr, J. (2000). *A guide to effective care in pregnancy and childbirth* (3rd ed.): Oxford University Press.
- Fernandez, R. (2003). *Mappers of society: The lives, times, and legacies of great sociologists*. Westport, Connecticut: Praeger.
- Foucault, M. (1973). *The birth of the clinic: An archaeology of medical perception* (A. M. S. Smith, Trans.). New York: Vintage.
- Foucault, M. (2000). *Power* (R. Hurley, Trans. Vol. 3). New York: New Press.
- Freda, M. C. (2003). Nursing's contribution to the literature on preterm labor and birth. *Journal of Obstetrics, Gynecology and Neonatal Nursing*, 32(5), 659-667.
- Freston, M. S., Young, S., Calhoun, S., Fredericksen, T., Salinger, L., Malchodi, C., & Egan, J. F. (1997). Responses of pregnant women to potential preterm labor symptoms. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 26(1), 35-41.
- Gibson, G. (2003). Grounded theory. In J. D. Brewer & R. L. Miller (Eds.), *The A-Z of Social Research* (pp. 132-134). Thousand Oaks: Sage.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago: Aldine.
- Goulet, C., Gevery, H., Lemay, M., Gauthier, R., Lepage, L., Fraser, W., & Polomeno, V. (2001). A randomized clinical trial of care for women with preterm labour: home management versus hospital management. *Canadian Medical Association Journal*, 164(7), 985-991.
- Gross, M., Haunschild, T., Stoexen, T., Methner, V., & Guenter, H. (2003). Women's recognition of the spontaneous onset of labor. *Birth*, 30(4), 267-271.
- Harrison, M., Kushner, K., Benzies, K., Kimak, C., Jacobs, P., & Mitchell, B. (2001). In-home nursing care for women with high-risk pregnancies: Outcomes and cost. *Obstetrics & Gynecology*, 97(6), 982-987.
- Health Canada. (2003). *Canadian Perinatal Health Report*. Ottawa, Canada: Minister of Public Works and Government Services Canada.

- Heaman, M., Dacombe, L., Thompson, L., Helewa, M., & Wiesner, M. (1995). *Report on the St. Boniface General Hospital/Manitoba Health Antenatal Home Care Program*. Winnipeg: St. Boniface General Hospital/Manitoba Health.
- Iams, J. (1998). Prevention of preterm birth. *New England Journal of Medicine*, 338(1), 54-56.
- Iams, J. (2003). Prediction and early detection of preterm labor. *Obstetrics & Gynecology*, 101(2), 402-412.
- Iams, J., Johnson, F., & Parker, M. (1994). A prospective evaluation of the signs and symptoms of preterm labor. *Obstetrics and Gynecology*, 84(2), 227-230.
- Iams, J., Newman, R., Thom, E., Goldenberg, R., Mueller-Heubach, E., Moawad, A., Sibai, B., Caritis, S., Miodonvnik, M., Paul, R., Dombrowski, M., & McNellis, D. (2002). Frequency of uterine contractions and the risk of spontaneous preterm delivery. *New England Journal of Medicine*, 346(4), 250-255.
- Jaggär, A. M. (1989). Love and knowledge: Emotion in feminist epistemology. In A. M. Jaggär & S. R. Bordo (Eds.), *Gender/Body/Knowledge: Feminist reconstructions of being and knowing* (pp. 145 - 171). New Brunswick: Rutgers University.
- Jaggär, A. M., & Bordo, S. R. (Eds.). (1987). *Gender/Body/Knowledge: Feminist reconstructions of being and knowing*. New Brunswick: Rutgers University.
- Janssen, P. (1997). *Antepartum home care program evaluation* (ISBN 0-9682319-0-X). Vancouver: B.C. Women's Hospital and Vancouver Richmond Health Board.
- Katz, M., Goodyear, K., & Creasy, R. (1990). Early signs and symptoms of preterm labor. *American Journal of Obstetrics and Gynecology*, 162(5), 1150-1153.
- Kitzinger, S. (2000). *Rediscovering birth*. New York: Pocket Books.
- Lederman, R. (1984). *Psychosocial adaptation in pregnancy*. Englewood Cliffs, New Jersey: Prentice Hall.
- Lederman, R. P., Lederman, E., Work, B. A., & McCann, D. S. (1978). The relationship of maternal anxiety, plasma catecholamines, and plasma cortisol to progress in labor. *American Journal of Obstetrics and Gynecology*, 132(5), 495-500.
- Lederman, R. P., Lederman, E., Work, B. A., & McCann, D. S. (1979). Relationship of psychological factors in pregnancy to progress in labor. *Nursing Research*, 28(2), 94-97.

- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills: Sage.
- Lockwood, C. J. (2002). Predicting premature delivery - no easy task. *New England Journal of Medicine*, 346(4), 282-284.
- Mackey, M. C., & Coster-Schulz, M. A. (1992). Women's views of the preterm labor experience. *Clinical Nursing Research*, 1(4), 366-384.
- Melia, K. M. (1997). Producing 'plausible stories': Interviewing student nurses. In G. Miller & R. Dingwall (Eds.), *Context and method in qualitative research* (pp. 26-36). Thousand Oaks: Sage.
- Mishel, M. R. (1988). Uncertainty in illness. *Image: Journal of Nursing Scholarship*, 20, 225-232.
- Moore, M., & Freda, M. (1998). Reducing Preterm and Low Birthweight Births: Still a Nursing Challenge. *American Journal of Maternal/Child Nursing*, 23(4), 200-208.
- Morse, J. M., & Field, P. A. (1995). *Qualitative Research Methods for Health Professionals* (2nd ed.). Thousand Oaks: Sage.
- Morse, J. M., & Richards, L. (2002). *Readme First for a User's Guide to Qualitative Methods*. Thousand Oaks: Sage.
- National Center for Health Statistics. (2003, Dec 17, 2003). *Births: final data for 2002* [electronic]. Retrieved March 20, 2004, from the World Wide Web: <http://www.cdc.gov/nchs/data/nvsr>
- O'Connor, T., Heron, J., Golding, J., & Glover, V. (2003). Maternal antenatal anxiety and behavioural/emotional problems in children: A test of a programming hypothesis. *Journal of Child Psychology and Psychiatry*, 44(7), 1025-1036.
- Patterson, E. T., Douglas, A. B., Patterson, P. M., & Bradle, J. B. (1992). Symptoms of preterm labor and self-diagnostic confusion. *Nursing Research*, 41(6), 367-372.
- Rubin, R. (1984). *Maternal identity and the maternal experience*. New York: Springer.
- Salvador, A., Davies, B., Fung Kee Fung, K., Clinch, J., Coyle, D., & Sweetman, A. (2003). Program evaluation of hospital-based antenatal home care for high-risk women. *Hospital Quarterly*, Spring, 67-73.
- Sandelowski, M. (1993). Rigor or rigor mortis: The problem of rigor in qualitative research revisited. *Advances in Nursing Science*, 16(2), 1-8.

- Sandelowski, M. (1995). Focus on qualitative methods: Sample size in qualitative research. *Research in Nursing and Health*, 18, 179-183.
- Schwandt, T. A. (2001). *Dictionary of qualitative inquiry* (2nd ed.). Thousand Oaks: Sage.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Newbury Park, CA: Sage.
- Surrey Memorial Hospital. (2002). *Antepartum care at home program manual*. Unpublished manuscript, Surrey, British Columbia.
- Weiss, M. E., Saks, N. P., & Harris, S. (2002). Resolving the uncertainty of preterm symptoms: Women's experiences with the onset of preterm labor. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 31(1), 66-76.
- West, C., Palmer, L., & Tier, T. (2000). No place like home. *Canadian Nurse*, 96(9), 32-34.
- Young, K. (1997). *Presence in the flesh: The body in medicine*. Cambridge: Harvard University.

## **Appendix A**

### ***Glossary***

#### ***Ferning test***

This is a test to confirm ruptured membranes. During a speculum exam, a swab from vaginal secretions is placed on a microscope slide and allowed to air dry for 10 minutes. Under a microscope, the salts in amniotic fluid will form a fernlike pattern when they crystallize. Cervical mucous can also cause ferning.

#### ***Fetal fibronectin test***

Fetal fibronectin is a glycoprotein that is produced by the chorion and is released into cervicovaginal secretions when there is a disruption between the chorion and decidua. If the fibronectin test is positive between 22 and 35 weeks, there is a 14-fold increased risk of preterm birth before 28 weeks and a six-fold increased risk of preterm birth before 35 weeks. A negative test rules out 97-99 percent of preterm birth within 14 days for women who experience preterm labour symptoms when they have intact membranes and cervical dilation less than three centimetres.

#### ***Glucocorticoids (corticosteroids)***

Glucocorticoids are given by intramuscular injection to women who are at risk of preterm birth to accelerate fetal lung maturity. The women in this study received two doses of Betamethasone 12mg, 24 hours apart.

#### ***Home uterine activity monitoring***

Frequency of contractions are recorded by placing a tocodynamometer on the uterus of pregnant women while they remain in their homes. The record is electronically transmitted to a central station where health care providers assess the tracing.

#### ***Nitrazine test***

During a speculum exam, nitrazine paper is used to test the pH of vaginal fluid to confirm preterm rupture of the membranes. Amniotic fluid is alkaline and will turn the paper blue, whereas vaginal secretions are usually acidic. Other conditions, such as vaginal infection or the presence of blood or semen can produce an alkaline medium and will also turn the paper blue.

***Speculum exam***

A speculum is inserted into the vagina and opened to inspect the cervix and vagina. When preterm rupture of the membranes is suspected, a sterile speculum exam is carried out to observe pooling of amniotic fluid in the posterior fornix when the woman coughs.

***Tocolysis***

Tocolytic therapy involves medical procedures to delay preterm birth and treatment varies between institutions and countries. The usual goal of tocolysis is to postpone birth for 48 hours to allow maximum effect of glucocorticoids on the fetal lungs, antibiotic therapy for group B streptococcus prophylaxis, and transfer to a facility that is equipped to care for preterm newborns. The women in this study were prescribed bed rest, and were given intravenous hydration, sedation, or medication to inhibit prostaglandin synthesis.

***Transvaginal ultrasound***

Ultrasonographic measurement of cervical length is most accurately assessed when the ultrasound probe is inserted into the vaginal canal. Cervical effacement begins with the internal os of the cervix and the length of the residual closed portion of the cervix is the most consistently correlated indicator of preterm birth. Transabdominal sonography is associated with falsely long measurements because urine in the maternal bladder exerts an unpredictable effect on the measured length of the cervix. In this study, the cervixes of most participants were measured by transabdominal ultrasound.

When the study is finished, the results will be published in a journal for health care providers.

**What will you be expected to do if you participate in the study?**

If you choose to participate in the study, Lynne Palmer, the researcher, will interview you one or two times for 30 minutes to one hour following another episode of labour. Interviews may take place after the baby is born or after another bout of preterm labour when you are still pregnant. After you give birth or if you have more preterm labour and need to return to the hospital, you would be asked to telephone Lynne Palmer to let her know. The antepartum nurses may also notify the researcher if you return to hospital for preterm labour. When you feel up to it, you will be interviewed either in-hospital or in your home depending on what you prefer.

While you are receiving antepartum care at home you will be asked to complete a one-page questionnaire about yourself. It will take approximately five minutes to complete. Information from your recording chart that you keep daily while on the Antepartum Home Care Program will also be collected. As the study progresses, Lynne Palmer may check with you by telephone that her interpretations of what women on the study are experiencing is true to you.

It is not required that you participate in this study. If you change your mind after giving consent to participate, you may withdraw from the study and your care will not be affected.

**How will your information be used?**

Your identity will be kept strictly confidential by using study code numbers. The interviews will be tape recorded and typed out but your name and any information that would

## **Appendix D: Interview Guide**

Opening question:

Tell me about how you decided you needed to go to the hospital.

Examples of probes to further explore the topic:

1. What happened at home before you came into hospital?
2. What was it like when you were still at home?
3. Was there anybody or anything that made you think you should come to the hospital?
4. Was there anybody or anything that made you think you should not come to the hospital
5. What would you teach another woman about knowing if she is in labour?
6. How are you feeling about the whole thing?
7. Is there anything you would like to tell me about going into labour?



**Appendix E: Demographic and Pregnancy Related Characteristics Form**

1. Study code number \_\_\_\_\_
2. Date today \_\_\_\_\_ Date admitted to ACAHP \_\_\_\_\_
3. What is your age? \_\_\_\_\_
4. Is this your first pregnancy? (circle one)      Yes      no
  - a. If no, for how many weeks were you pregnant with each of your other babies?  
\_\_\_\_\_
5. How many children live with you at home? \_\_\_\_\_
6. What are the ages of the children living with you? \_\_\_\_\_
7. Do you live with a partner? (circle one)      yes      no
8. What language do you speak at home? \_\_\_\_\_
9. As well as being Canadian what other ethnic origin do you have? \_\_\_\_\_
10. Do you work outside of your home? (circle one)      yes      no
11. Does your partner work outside of your home? (circle one)      yes      no
12. What is the highest level of education that you have completed? (circle one)
  - a. Grade 7
  - b. Grade 12
  - c. Post-secondary trade, certificate or diploma
  - d. University degree

Information about your baby that we will collect after he/she is born:

Date of birth \_\_\_\_\_ Gestational age at birth \_\_\_\_\_