Université d'Ottawa · University of Ottawa

Université d'Ottawa · University of Ottawa

FACULTÉ DES ÉTUDES SUPÉRIEURES ET POSTDOCTORALES

FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

LAFRANCE, Josée

AUTEUR DE LA THÈSE - AUTHOR OF THESIS

M.Sc. (Nursing)

GRADE - DEGREE

School of Nursing

FACULTÉ, ÉCOLE, DÉPARTEMENT - FACULTY, SCHOOL, DEPARTMENT

TITRE DE LA THÈSE - TITLE OF THE THESIS

Mother-Baby Togertherness: A Survey of Women's Postpartum Experiences in Four Maternity Units

Barbara Davis

DIRECTEUR DE LA THÈSE - THESIS SUPERVISOR

EXAMINATEURS DE LA THÈSE - THESIS EXAMINERS

Ian Graham

Jennifer Medves

J.-M. De Koninck, Ph.D.

LE DOYEN DE LA FACULTÉ DES ÉTUDES SUPÉRIEURES ET POSTDOCTORALES

SIGNATURE

DEAN OF THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

MOTHER-BABY TOGETHERNESS:

A SURVEY OF WOMEN'S POSTPARTUM EXPERIENCES

IN FOUR MATERNITY UNITS

BY

JOSÉE LAFRANCE

Thesis submitted to the School of Graduate Studies and Research
in partial fulfillment of the requirements
for the degree of Master of Science in Nursing

University of Ottawa

September, 2003

Your file Votre référence
ISBN: 0-612-90101-7
Our file Notre référence
ISBN: 0-612-90101-7

Abstract

Purpose: To describe women's postpartum experiences with mother-baby togetherness in hospital, and the concordance of their experiences with the recommendations from Health Canada (2000a) on family-centred maternity and newborn care (FCMNC).

Design: Descriptive study based on secondary analysis of a telephone survey conducted at one week and six weeks postnatally. Five elements reported by women were examined: the timing of first physical contact, physical proximity during the first few hours, transfer together to postnatal unit, rooming-in, and combined mother-baby care.

Setting: Four maternity units in Ottawa (Ontario, Canada) including two level I units, one level II and one level III unit. A proportionate sample was drawn from each unit. The overall response rate to both interviews was 88.3%.

Participants: Women ($N = 552$) who returned home with their babies within the first postnatal week, between October 2000 and March 2001.

Findings: While in hospital, 95.8% of mothers and babies were separated. Combined care was reported by 84.7% of women and rooming-in by only 33.9% of women. Only 8.8% of women experienced all five FCMNC recommended practices. Practices varied between the units ($p < .001$). Women who had a caesarean birth were more likely to be separated from their infants than those who had a vaginal birth. Routine procedures performed in the nursery was the most frequently reported reason (55.8%) for the first separation of mothers and babies.

Conclusion: Few women reported receiving care based on the FCMNC recommendations about mother-baby togetherness. Hospital practices varied considerably. It is recommended that healthy newborns receive care at their mothers' bedside. Further

research is recommended to study the relationship between unit policy, actual practices, nurses' beliefs and women's preferences about the elements of mother-baby togetherness.

Acknowledgements

I am very grateful to the people who were involved in the development of this thesis and who supported me throughout this adventure. Firstly, I would like to thank Dr. Barbara Davies, my thesis supervisor, for her guidance and patience, and for her strive for excellence in research. As members of my thesis committee, Dr. Davies, Dr. Ian Graham and Dr. Denise Moreau provided very enlightening suggestions and comments, and continuously showed their willingness to provide constructive feedback.

This thesis would not have been realized without the data from the Family Centred Maternity Care Study which was funded by the Public Health and Long Term Care branch and the Public Health Research, Education and Development program of the City of Ottawa. Jane Simpson facilitated the data transfer process and Janice Potter provided practical assistance with the dataset. Sandra Dunn, a fellow Master of Science in Nursing student, was a good partner in auditing and cleaning the dataset. I appreciated her timely words of encouragement during my thesis write-up.

I am grateful to Marlene Ghattas, clinical director at the Ottawa Hospital, and to the managers and nurse educators from the four maternity units for their interest in mother-baby togetherness. I acknowledge the support and encouragement my colleagues at the Université du Québec à Trois-Rivières showed for the completion of this thesis.

Finally, I would like to heartily thank my spouse, Donald Dion, for his helpful critical observations, for stimulating my reflections, and particularly for his everyday care which embellished the many hours spent working on this thesis.

Table of contents

List of tables

List of figures

Chapter One: Problem

Family-centred maternity and newborn care represents not only a set of principles and concepts but also a philosophy throughout the childbearing cycle (Health Canada, 2000a; Society of Obstetricians and Gynaecologists of Canada, 1998). After birth, providing parents and babies with the opportunity to be together is the most basic form of family-centred care (McKay & Phillips, 1984). The latest Canadian guidelines on family-centred maternity and newborn care (FCMNC) address the postnatal period and specifically support the concept of mother-baby togetherness: "Women need to be cared for within the context of their families. Mothers and infants are to be cared for as a unit, and should not be separated unless absolutely necessary" (Health Canada, 2000a, p. 6.6). The midwifery statement of values and ethics recognizes the mother-baby as a whole, specifying that it is the right of each baby to be without separation from mother and family (Midwives Alliance of North America, 2002). The Society of Obstetricians and Gynaecologists of Canada (SOGC) (1998) also recommend keeping mother and baby together unless medical circumstances indicate otherwise.

Based on an extensive review of the literature about the non-separation of mothers and babies, the author identified five elements relevant to the postnatal period: (a) timing of first physical contact, (b) physical proximity during the first few hours, (c) transfer together to postnatal unit, (d) rooming-in, and (e) combined mother-baby care. The author grouped these specific elements into one newly developed construct: mother-baby togetherness. Research evidence shows benefits for each element of mother-baby togetherness and the Health Canada (2000a) FCMNC guidelines recommend that each element should be a daily reality in maternity units.

The timing of first physical contact refers to the time elapsed between birth and the

first time a mother holds or touches her baby. Early and extended contact has beneficial effects on maternal affectionate behaviour (Enkin et al., 2000). The later the timing of first physical contact, the lower the maternal emotional well-being (Rowe-Murray & Fisher, 2001). Furthermore, contact within 30 minutes and for at least half an hour contributes to the successful initiation of breastfeeding (World Health Organization [WHO], 1998). In the literature there are variations in practice regarding the timing of first physical contact for births in a hospital environment. In Sweden, 75% of mothers with vaginal births first held or touched their babies within the first 12 hours as opposed to 22% of those who had a caesarean section (Hedberg, Nyqvist & Ewald, 1997). In Australia, the timing of first contact was also much later for caesarean births than for spontaneous or assisted vaginal births and varied according to the type of maternity unit (Rowe-Murray & Fisher, 2002). For instance, amongst mothers who had a caesarean birth, 87% held their babies within 30 minutes in a Baby Friendly hospital, as opposed to less than 50% of mothers in other hospitals (Rowe-Murray & Fisher, 2002). No information was found on the timing of first physical contact in Canadian maternity units.

Physical proximity during the first few hours after birth takes place when the baby is close to the mother, being at least within her sight. It is an important element of mother-baby togetherness because proximity contributes to the establishment of attachment (Lobar & Phillips, 1992; Salariya, 1990). In Canada in 1993, only 60% of all hospitals had a policy to facilitate the family being together, of which large hospitals and teaching hospitals were more likely to have such a policy (Levitt, Hanvey, Avard, Chance, & Kaczorowski, 1995). Despite institutional policies, practices within the first few hours can interfere with physical proximity. For instance between 1989 and 1993, routine observation of the newborn in the nursery rather than next to the mother remained a feature

in 66% of Ontario hospitals (Hanvey, Mohide, Shennan, & Sutherland, 1991; Levitt et al.). More recently, 50% of American obstetric units still routinely gave the first bath and performed the initial assessment of the newborn in nursery (Bajo, Hager & Smith, 1998). In the United States in 2002, 69% of mother-baby separations during the first hour after birth were due to staff performing routine care to babies who did not require any type of special care (Declercq, Sakala, Corry, Applebaum & Risher, 2002). The current policies and practices regarding physical proximity soon after birth are not documented in Ontario.

The transfer of a mother and baby to the postnatal unit refers to the transportation of the dyad from the labour and birth unit to the postnatal ward. With mother-baby togetherness, mother and baby are transferred together. Women have expressed dissatisfaction with care when they are separated from their babies during transfer (Capitulo & Silvenberg, 2001). In Ontario from 1989 to 1993, the routine separation for transfer decreased from 55% to 45% (Hanvey et al., 1991; Levitt et al., 1995). Trends or recent Canadian data on separation for transfer to the postnatal unit are not known at this point.

Rooming-in refers to the practice of keeping mother and baby next to each other, in the same room. Research evidence shows that unrestricted 24 hour rooming-in is a key factor in enhancing the duration of breastfeeding, in reducing child abuse and in protecting the neonate against nosocomial infections (Enkin et al., 2000; Fairbank et al., 2000; WHO, 1998). In Ontario in 1989, 51% of hospitals offered rooming-in on a 24 hour basis, and four years later, 64% offered it on a 19 to 24 hour basis (Hanvey et al., 1991; Levitt et al., 1995). However, availability of rooming-in does not signify uptake by women. For instance, in the United States, a range from 25% to 75% of women choose not to room-in at night (Bajo et al., 1998). Indeed, very recently, 27% of 1583 American women surveyed did not room-in at night (Declercq et al., 2002). According to the results from another

American survey conducted amongst 1085 breastfeeding women, 55% of them did not room-in 24 hours a day whilst in hospital (DiGirolamo, Grummer-Strawn & Fein, 2001). The women gave no reason for their preference. The uptake of rooming-in in Ontario is not documented.

With combined mother-baby care, one nurse per shift provides care to both the mother and her baby (Health Canada, 2000a). The quality of parent education, the nurse-client relationship, perceived maternal competence and satisfaction with care are improved with combined care (Watters & Kristiansen, 1995). Combined mother-baby care became more frequent in Ontario between 1989 and 1993, increasing from 69% to 84% of hospitals (Hanvey et al., 1991; Levitt et al., 1995). In 1996, only 60% of American hospitals practised combined care, mainly because mothers and babies were separated "at night so the mother 'can rest'" (Zwelling & Phillips, 2001, p. 6). Similarly to rooming-in, certain issues such as hospital practices and women's wishes during their postnatal hospital stay seem to hinder full adherence to this model of care. Further information on the situation with combined care is required to address these issues.

So far, the available information on mother-baby togetherness mainly comes from institutional self-reports about their policies and practices. Women's report of their actual experiences at the receiving end of postnatal services has rarely been explored and "may provide a different perspective" (DiGirolamo et al., 2001, p. 99). It is therefore important to investigate women's experiences, particularly about the postnatal period, an aspect of the childbearing continuum often overlooked (Wray & Benbow, 2001). It is only recently that the first national report on childbearing in the United States was produced, based on women's recall of their experiences (Declercq et al., 2002).

In Canada, the literature on women's postpartum experiences focuses mainly on

their satisfaction with models of care and institutional facilities (Janssen, Klein, Harris, Soolsa & Seymour, 2000; Watters & Kristiansen, 1995). Based on institutional reports a decade and more ago, the authors from both the Canadian and Ontario surveys concluded that work still needed to be done to improve mother-baby contact, before hospital practices would correspond with the national guidelines on FCMNC (Hanvey et al., 1991; Levitt et al., 1995). Despite these reports, evidence in favour of mother-baby togetherness and clear guidelines on FCMNC, there are still some barriers to the full implementation of 24 hour combined mother-baby care in maternity units in Ottawa, Ontario (Ghattas, 2001). However no data is available to reflect the state of mother-baby togetherness in maternity units in Ottawa.

Purpose of the Study

The purpose of the study was to describe women's postpartum experiences with mother-baby togetherness in hospital, and the concordance of their experiences with the evidence-based recommendations on FCMNC.

The specific research objectives were:

1. To describe the frequency of (a) the timing of first physical contact, (b) physical proximity during the first few hours, (c) transfer together to postnatal unit, (d) rooming-in, and (e) combined mother-baby care reported by women.
2. To describe the extent to which women's experiences with the five elements of mother-baby togetherness concord with the evidence-based postnatal recommendations on FCMNC.
3. To examine the relationship between each of the five elements of mother-baby togetherness and selected women's demographic characteristics, perinatal characteristics and four maternity units.

4. To identify when mothers and babies are separated for the first time and the reasons reported by women.

Relevance of the study

Mother-baby togetherness is an important construct to study because events women experience in the early postpartum period influence their coping mechanisms, their emotional well-being and the development of the dyad's mutual attachment (Ball, 1994). Early experiences also affect the uptake and/or duration of breastfeeding (Enkin et al., 2000; Fairbank et al., 2000). Furthermore, the nutrition, care and nurturing an infant receives are important factors for early child development because they wire and sculpt the brain almost irreversibly (McCain & Mustard, 1999). Although the stay in hospital is of short duration, women's reactions to care can affect the way they care for themselves and their babies (Garcia, Redshaw, Fitzsimons & Keene, 1998). Experiences in hospital set the stage for the dyad's needs in the community.

In view of the benefits for mother and baby to remain together right from the moment of birth, it is pertinent to determine whether, why, where and when separation exists in maternity units in Ottawa. The information provides data to help in program planning on a regional level and in quality assurance activities on a maternity unit level. The data is also helpful in determining the gaps between the recommendations on FCMNC and women's experiences regarding mother-baby togetherness. Once gaps or appropriate practices are identified, healthcare providers can be made aware of areas where practice needs to be improved. Interpretation of the data helps to identify priorities for practice, education and future research. Furthermore, eliciting women's views is compatible with a client-oriented approach, a principle of the FCMNC philosophy.

Organization of the study

Following this chapter, the study is divided into four chapters. Chapter two provides a critical review of the literature on each of the five elements of mother-baby togetherness and introduces the conceptual framework. Chapter three describes the study methods. Chapter four presents the results in line with the study objectives. The last chapter discusses the main findings, the limitations and strengths of the study , and some recommendations.

Chapter Two: Review of the literature

This chapter offers a review of the literature on the five of elements mother-baby togetherness. As a newly developed construct, mother-baby togetherness does not appear in the literature. Therefore, this chapter is divided according to the five elements of mother-baby togetherness: (a) timing of first physical contact, (b) physical proximity during the first few hours, (c) transfer together to postnatal unit, (d) rooming-in, and (e) combined mother-baby care. In this chapter, only the literature relevant to the immediate and early postnatal period within hospital settings is presented. Each section includes a description of the element, the clinical guideline or recommendations for practice, empirical evidence for and factors associated with each element. The last two sections of this chapter present the conceptual framework and definitions for this study.

The literature search strategy covered publications in English or French from the early 1970's to 2002 and included books, reports, guidelines and journal articles. The databases searched for journal articles were the Cumulative Index to Nursing and Allied Health Literature (CINAHL), The Cochrane Library, Medline and PreMedline. The text words used for the search are presented in Appendix A.

Timing of first physical contact

The timing of first physical contact refers to the time elapsed between birth and the first time a mother holds or touches her baby. The timing of first contact should be immediately after birth, according to the principle of non-separation of mother and baby from the guidelines on FCMNC (Health Canada, 2000a; SOGC, 1998). The World Health Organization (1998) also recommends immediate and continuous contact between mothers and babies who do not require medical attention. In the literature, the timing of first physical contact is referred to mainly as early and late contact. Early contact is referred to

as contact immediately after birth or within the first 30 minutes after birth.

A review from the WHO (1998) concludes: early skin-to-skin contact plays an important role on maternal behaviour. The WHO's position is based on a critical review of the evidence about their Ten Steps to Successful Breastfeeding from experimental, quasi-experimental and non-randomized prospective cohort studies published from 1951 to 1997. A systematic review of three randomized trials involving 209 women and their healthy term infants compared early skin contact and breastfeeding with late skin contact and breastfeeding (Renfrew, Lang & Woolridge, 1999). The trials included were published from 1978 to 1990. The results show that mothers who are in skin-to-skin contact with their babies and breastfeed within 30 minutes of birth are more likely to breastfeed without any problems at night. Mothers who initiate breastfeeding and are in contact with their infants four to eight hours after birth are less likely to communicate with their babies than those who have early contact and early breastfeeding (odds ratio [OR] = 0.14, 95% confidence interval [CI]: 0.03-0.61). In neither review, the distinction between early contact and early breastfeeding is made (Enkin et al., 2000; Renfrew et al.; WHO). Furthermore, early contact with or without skin-to-skin contact was not differentiated.

A meta-analysis, and two subsequent retrospective studies and a prospective longitudinal study establish a link between the timing of first physical contact and the type of birth. The meta-analysis on various psychological outcomes of childbirth included 43 studies published from 1966 to 1993, comparing groups of women with a caesarean delivery (N = 23 874) and a vaginal delivery (N = 58 238) (DiMatteo et al., 1999). Mothers with full-term babies regardless of the type of delivery were included in the Swedish retrospective study (N = 148) by Hedberg et al. (1997) and in the Australian prospective study (N = 203) by Rowe-Murray and Fisher (2002). In the meta-analysis and the two

studies published afterwards, the timing of first contact was much later for mothers and babies who experienced a caesarean birth compared to those who experienced a vaginal birth.

Focussing on maternal psychological health and its relationship to early contact and the mode of delivery, Rowe-Murray and Fisher (2001) conducted a prospective longitudinal study with 164 primiparas from four hospitals. The investigators used a First Contact Index which was made of women's account about the time of, the duration of and their feelings at first holding. First Contact Index scores varied between groups of different modes of delivery ($p < .001$) and between the hospitals ($p < .001$). Women who had a spontaneous vaginal delivery scored higher than those in the instrumentally delivered and caesarean section groups. Women who gave birth in a Baby Friendly hospital scored higher than those from the other hospitals, across all modes of delivery groups. In addition, higher First Contact Index scores were associated with lower scores on the Edinburgh Postnatal Depression Scale at two days and at eight months. A longer delay in the time of first holding was associated with diminished maternal emotional well-being ($p < .01$), regardless of the mode of delivery. However, the duration of physical contact was not associated with postpartum mood.

From the literature, the timing of first physical contact has been shown to influence breastfeeding rates, maternal psychological health and mother-infant interactions. The timing of first contact is affected by the type of birth and the type of hospital.

Physical proximity during the first few hours

Physical proximity during the first few hours after birth occurs when the baby is close to the mother, being at least within her sight. The SOGC (1998) clinical practice guidelines specify that during the first two hours after birth, mother and baby should not be

separated. In addition, "routines should NOT necessitate the separation of the mother and baby" (SOGC, 1998, p. 60) and observation of the normal newborn must take place in the mother's room, not in the nursery.

According to a national survey on women's childbearing experiences in the United States, routine care performed shortly after birth in the nursery precludes mothers and babies from remaining together (Declercq et al., 2002). The authors reported that 45% of all babies were separated from their mothers during the first hour after birth. The reason stated by 69% of women was for staff to perform routine care. However, 40% of all babies were mainly in their mothers' arms during the first hour, or in their partners' arms for an additional 13% of them. The survey was conducted amongst English speaking women, aged 18 to 44 years, who had given birth to a single baby between mid-2000 and mid-2002. Participants were selected to be representative of the national population of American women who corresponded to the inclusion criteria. Representation of the population, however, was limited to women who had access to a computer or a telephone, since the questionnaire was completed either online ($N = 1447$) or during a telephone interview ($N = 136$). Nonetheless, the data prompted Declercq et al. to recommend that restriction of mother-baby contact, at any time, is not acceptable unless clear evidence supports separation (Maternity Center Association, 2002). Declercq et al. add that evidence to date does not hold any clear indications to separate healthy mothers and babies.

Physical proximity during the first few hours after birth and the timing of first physical contact are frequently studied as one variable. For instance, conclusions from the WHO's (1998) extensive review of the literature indicate that early and/or uninterrupted contact favourably influences breastfeeding. The review includes a frequently quoted Spanish randomized controlled trial by Christensson, Cabrera, Christensson, Uvnäs-

Moberg and Winberg (1995) and a Swedish comparative observational study by Righard and Aslade (1990). Results from both studies show a statistically significant relationship between proximity during the first few hours and infants' crying, temperature and sucking pattern.

Christensson et al. (1995) studied healthy term neonates' reactions to separation after birth. They found that when they were separated from their mothers, neonates who had had skin-to-skin contact with their mothers cried less compared to babies who had been in a cot next to their mothers. The babies were also warmer as measured by the axillary temperatures. However, the sample size was small ($N = 44$). Power and effect size were not reported, neither was infant feeding during the 90 minute experimental period. This study would not be replicable in Canada because it would probably not receive ethics approval in view of the FCMNC national guidelines on postnatal togetherness and the importance of initiating breastfeeding according to the newborn's rhythms after birth.

The effect of separation and exposure to intrapartum pethidine/meperidine on suckling technique was studied by Righard and Aslade (1990). In the comparative observational study, neonates delivered normally ($N = 72$) were immediately put in contact with their mothers. Half were separated after 20 minutes for routine weighing, bathing and dressing, then returned to their mothers. Sixty-three percent of infants with continuous contact sucked correctly, compared to 21% in the separation group ($p < .001$). In each group, 56% of mothers had received pethidine/mepiridine. Amongst the infants exposed to the narcotic, 38% of the contact group sucked correctly but none of the separation group did ($p < .001$). Despite immediate physical contact with the mother, separation shortly after birth and use of an analgesic were associated with disrupted suckling pattern.

From the literature, physical proximity appears to influence breastfeeding, infant's

temperature and inborn behaviour. Babies whose mothers used intrapartum analgesia and were not physically close to them were less likely to suck correctly.

Transfer together to postnatal unit

The transfer of a mother and her baby to the postnatal unit occurs when the dyad changes room, from the labour and birth unit to the postnatal ward. The FCMNC national guidelines support the non-separation of healthy mothers and babies throughout their time in hospital, and the dyad should therefore be transferred together (Health Canada, 2000a). In the literature, empirical evidence on the impact of transfer to postnatal unit is limited.

Based on a review of the literature, Ashmore (2001) discussed the barriers to skin-to-skin contact in the immediate postnatal period. She explains that routines are obstacles to full implementation of the Baby Friendly Initiative. Regarding transfer to postnatal unit, Ashmore adds that maintaining contact between mother and baby is feasible, safe and reassuring to mothers. Her publication is supported by a prospective longitudinal study by Rowe-Murray and Fisher (2002). Amongst 203 dyads with similar characteristics, Rowe-Murray and Fisher (2002) studied the impact of hospital practices in a Baby Friendly hospital and three other hospitals on first mother-baby contact and initiation of breastfeeding. Their results showed institutional differences in practices which facilitated the first contact and the initiation of breastfeeding. The authors cited transfer to postnatal ward as an additional example of hospital practices. They concluded that practices within each unit influenced mother-baby separation.

In a qualitative descriptive study using grounded theory, Martell (2001) analysed first-time mothers' postpartum experiences ($N = 32$). Women viewed the postnatal period as a continuous process heading toward the new normal. For them, being transferred from the labour and birth unit to the postpartum unit symbolized their transition from pregnancy

to motherhood. The author adds that hospital environments and nursing practices help or hinder women being with their newborns.

From the scant literature on transfer to postnatal unit, this element of mother-baby togetherness can be affected by hospital practices. Transferring mothers and babies together to the postnatal unit could have an impact on outcomes such as breastfeeding and maternal psychological adaptation to motherhood, but this has not been studied.

Rooming-in

Rooming-in refers to the practice of keeping mother and baby next to each other, in the same room. With a FCMNC approach, healthy mothers and babies remain together during their entire postnatal stay in hospital. The WHO (1998) recommends 24 hour rooming-in and the SOGC (1998) recommends that in maternity units, facilities should be organized to encourage not only mothers and babies to room-in, but fathers as well. According to the literature to date, the number of hours babies spend with their mothers seldom reaches 24 hours a day.

First-time mothers' behaviours and interactions with their babies have been compared between groups with and without rooming-in. Greenberg and Rosenberg (1973) conducted a randomized trial and found that mothers who roomed-in ($N = 50$) were more self-confident with their babies ($p = .001$), more competent in his/her care ($p = .01$) and could understand their babies' cry better ($p = .001$) than mothers who did not room-in ($N = 50$). Two comparative studies have involved young, low-income, African-American primiparas. According to Norr, Robert and Freese (1989), mothers who roomed-in ($N = 80$) scored higher on maternal attachment, on care taking and on affectionate behaviours like looking, talking and touching ($p < .05$). Prodromidis et al. (1995) also found more looking at their infants ($p = .05$), more talking to ($p = .02$) and more touching at the babies'

face and head ($p = .01$) with mothers who roomed-in ($N = 15$) compared to those who did not room-in ($N = 16$). In all three studies, rooming-in was not 24 hours a day and infant feeding methods were comparable within each group.

Rooming-in women who breastfeed do so for a longer time than those who do not room-in (Enkin et al., 2000; Fairbank et al., 2000; Lawson & Tulloch, 1995; WHO, 1998). Fairbank et al. conducted a systematic review on interventions to promote the initiation of breastfeeding. The 59 studies included were randomized controlled trials, non-randomized controlled trials and before-after studies published between 1975 and 1998. The reviewers concluded that rooming-in is an effective intervention for the initiation and duration of breastfeeding, whether alone or as part of a package of interventions including early contact and health education. Since the systematic review by Fairbank et al., there are however studies that do not support their finding. A longitudinal cohort study was conducted in the United States with 1085 women who intended and initiated breastfeeding for more than two months. DiGirolamo et al., (2001) did not find any association between breastfeeding duration and rooming-in. In a descriptive study ($N = 133$) not included in the latter systematic review, Kiehl, Cranston Anderson, Wilson and Fosson (1996) did not find any association between rooming-in and breastfeeding duration.

Although not all authors agree, to date the weight of evidence world wide supports a positive link between rooming-in and breastfeeding. In an additional recent survey conducted after the studies included in the systematic review by Fairbank et al. (2000), breastfeeding and rooming-in were linked together. According to Janssen et al. (2000) who conducted a comparative Canadian survey of low-risk women ($N = 530$), more women were breastfeeding in single room maternity care setting, which includes rooming-in, than in traditional care setting with less rooming-in. More women thought that they spent the

right amount of time with their families and their babies. Furthermore, those who benefited from single room maternity care were more satisfied with the information and support received than those who benefited from care in a traditional setting. Women were in contact with less caregivers and gave higher scores for the quality of nursing care and education.

Kiehl et al. (1996) found a link between rooming-in and epidural anaesthesia. In a controlled trial with healthy term neonates and their mothers ($N = 40$), Sepkoski, Lester, Ostheimer and Brazelton (1992) also found a link between rooming-in and epidural. Mothers who had an epidural during labour spent less time with their babies than those who did not have an epidural. Furthermore, higher doses of bupivacaine used for epidural were a predictor of less time spent rooming-in. In addition, newborns in the epidural group showed poorer orientation and motor skills than those whose mothers did not have an epidural. Ransjö-Arvidson et al. (2001) also observed poorer behavioural outcomes with healthy term neonates following intrapartum epidural anaesthesia and following intrapartum analgesia. It is not clear whether it is mothers' altered condition from medication or epidural anaesthesia, or whether it is their infants' altered behaviour which affects the amount of time mothers and babies spend together in hospital.

Mothers' lack of sleep and need for rest is frequently used as an argument against 24 hour rooming-in. Waldenström and Swenson (1991) conducted a quasi-experimental study to evaluate a programme of rooming-in at night amongst women who gave birth vaginally to a healthy baby (pretest $N = 104$), and the impact on maternal sleep and fatigue. Six months after the programme was implemented (post-test $N = 111$), there was no significant difference between the groups on the first postpartum night. The authors explain that nurses may have been reluctant to leave the baby with his/her mother and may

believe that mothers sleep better without their babies. However, the number of hours of rooming-in increased significantly from 16.1 to 17.7 on the second day ($p < .001$) and from 17.1 to 18.4 hours on the third day ($p < .02$). There was more rooming-in at night in the post-test group, but women were older ($p < .05$) and more stayed in a single or double room ($p < .001$). Therefore it might be maternal age and the type of room that influence rooming-in at night, and not the programme in place. Nonetheless, the number of hours mothers slept and their fatigue were not different between the groups. The findings indicate that 24 hour rooming-in or not, mothers are tired and do not sleep well during the postnatal period in hospital.

There is some evidence to indicate that mothers may actually prefer not to room-in 24 hours a day, so they can rest and sleep, despite evidence that fatigue and lack of sleep are a postnatal reality. In a Canadian comparative study of low-risk mothers ($N = 309$), the amount of rest was not enough for approximately one-third of women, regardless of single or traditional room settings (Janssen et al., 2000). Weiss and Armstrong (1991) found that all 105 mothers they surveyed, whether they roomed-in or received traditional care, preferred to have their babies in their room but wanted the option of nursery care for uninterrupted sleep. In another survey of 519 women who had given birth 10 to 22 months previously in one of four Australian hospitals, overall, mothers preferred when nurses or midwives did not strictly adhere to the rooming-in policy and looked after their babies so they could rest (Zadoroznyj, 1996). On the other hand, Bondas-Salonen (1998) identified in women's discourse a sense of emptiness when their babies were in the nursery.

The type of birth may also be related to rooming-in. According to the survey by Declercq et al. (2002) of 1583 American women, 45% of mothers who had a caesarean birth roomed-in compared to 60% of those who gave birth vaginally. The authors did not

test for statistical significance of the differences.

In summary, rooming-in has been found to improve mothers' self-confidence and competence in infant care, mothers' understanding of their infants' cry, mothers' attachment and affectionate behaviour toward their babies. With rooming-in, breastfeeding duration is increased and women are more satisfied with nursing care. Epidural anaesthesia, intrapartum analgesia and caesarean sections may lead to a reduction in the number of hours mothers and babies spend together in hospital. Rooming-in does not increase sleep deprivation or tiredness postnatally in hospital, but women seem to prefer when the option of nursery care for their infants is available when they want to rest.

Combined mother-baby care

Combined mother-baby care is the provision of care by one nurse per shift, or one midwife, for both the mother and her baby. With a FCMNC philosophy, mothers and babies are viewed as an interdependent unit physiologically and psychologically, which is reflected in the organization of care (Phillips, 1996). The guidelines from Health Canada (2000a) and the SOGC (1998) state that healthy mothers and babies should be cared for together. The literature on combined mother-baby care includes comparative studies of the effect of combined care versus traditional care, on maternal satisfaction, parental education, mother-baby contacts, breastfeeding and perceived maternal competence (Hansen Cottrell & Grubbs, 1994; Hill Bailey, Maciejewski & Koren, 1993; Janssen et al., 2000; Watters & Kristiansen, 1995).

The literature on combined care tends to cover rooming-in as well, because some authors see rooming-in as an integral part of combined mother-baby care (Health Canada, 2000a; Watters & Kristiansen, 1995; Weiss & Armstrong, 1991). For Phillips (1996), combined mother-baby care is not rooming-in. One is a model of nursing care and the

other is the fact that mothers and babies stay in the same room. However, for optimal FCMNC, mothers and babies should room-in, be cared for by one nurse per dyad and remain in one single room from labour to their return home (Janssen et al., 2000; Phillips, 1996). Janssen et al. found, in a comparative Canadian survey of low-risk women (N = 309), that more women breastfed with combined care in single room maternity care setting than with traditional care. However, Janssen et al. did not look at breastfeeding after the return home of mothers and babies. In another Canadian study (N = 408), Watters and Kristiansen found that breastfeeding success at six weeks was not different between women who received combined mother-baby care and those who received traditional care.

Three comparative studies were conducted with groups of mothers receiving combined care and groups receiving traditional care, before and after implementation of the combined care model (Hansen Cottrell & Grubbs, 1994; Hill Bailey et al., 1993; Watters & Kristiansen, 1995). The women in the three studies were similar with respect to age, living arrangement, parity, type of birth and infant feeding method. Combined care was associated with increased mother-baby contact and superior satisfaction with parent education in the study by Watters and Kristiansen but not in the other two studies. Women's learning needs were met and questions satisfactorily answered in all groups studied by Hansen Cottrell and Grubbs, and by Hill Bailey et al.. In the combined care groups, women were more satisfied overall and particularly about the nurse-client relationship (Hansen Cottrell & Grubbs; Hill Bailey et al.; Watters & Kristiansen). In the Watters's and Kristiansen's study, women who received combined care (N = 208) felt more competent with infant care compared to the traditional care group (N = 200). Hill Bailey et al. found the same results but only amongst multiparous women. Previous experience with infant care could explain the difference.

Overall, the literature indicates that women who received combined care are more satisfied than those who receive traditional care. The relationship between combined care and breastfeeding, mother-baby contact, and maternal competence need further study.

Summary

The literature on each of the five elements of mother-baby togetherness supports to varying degrees, the dyad's non-separation right from the moment of birth and throughout the hospital stay. Guidelines from Health Canada (2000a) the SOGC (1998) and the WHO (1998) recommend that mother-baby togetherness be applied in all aspects of postnatal care, unless medically contraindicated. Research shows variations in practices from one maternity unit to another and in ways of providing care within the same unit, suggesting that policies and routines can be adjusted to improve mother-baby togetherness. This is particularly applicable to circumstances like caesarean births and epidural anaesthesia which jeopardize togetherness.

Evidence so far indicates that mother-baby togetherness results in improved attachment, communication, maternal self-confidence, maternal emotional well-being, breastfeeding, satisfaction with care, neonatal thermoregulation and in less baby crying. However, some women seemed to want rest periods without their babies, even though there is little evidence that sleep and fatigue are improved with separation, but this aspect has not been extensively covered in the literature. Routine restriction of mother-baby contact has been classified as a form of care likely to be ineffective or harmful (Enkin et al., 2000).

Conceptual framework

To date, no conceptual framework or a definition on mother-baby togetherness was found in the literature. The theme of mother-baby togetherness is a construct derived from the literature regarding five elements related to the non-separation of mothers and babies.

These five elements are the concepts under investigation. The construct of mother-baby togetherness was deliberately and systematically created for this study.

The analytic framework for this study is presented in Figure 1. The model schematically represents the research variables. The framework shows the elements of mother-baby togetherness as the dependent variables, and women's characteristics and maternity unit as the independent variables. Arrows in the framework represent a possible relationship between the independent variables and the elements of mother-baby togetherness. The potential relationships between the variables were analysed.

Based on the literature, the author has selected ten variables possibly linked to each of the five elements of mother-baby togetherness. The selected variables are: age, education, living arrangement, language, parity, type of birth, use of analgesia, use of epidural, infant feeding method and the maternity unit.

The relationships between the elements of mother-baby togetherness and some of the selected variables are documented in the literature, others remain unexplored. The variables of education and living arrangement are included because they are typical demographic characteristics (Burns & Grove, 1999). Although the literature indicates that education and living arrangements are associated with breastfeeding, it is not known if these demographic variables are associated with any of the elements of mother-baby togetherness (Bourgoin et al., 1997; Kiehl et al., 1996; Lawson & Tulloch, 1995). The maternity units are named A, B, C, D because four sites provide maternity care in Ottawa. Concerns have been raised about the separation of mothers and babies in hospital in Ottawa (Ghattas, 2001). Since Ottawa is a bilingual city, the variable maternal language was included in the model despite no reference to it in the literature.

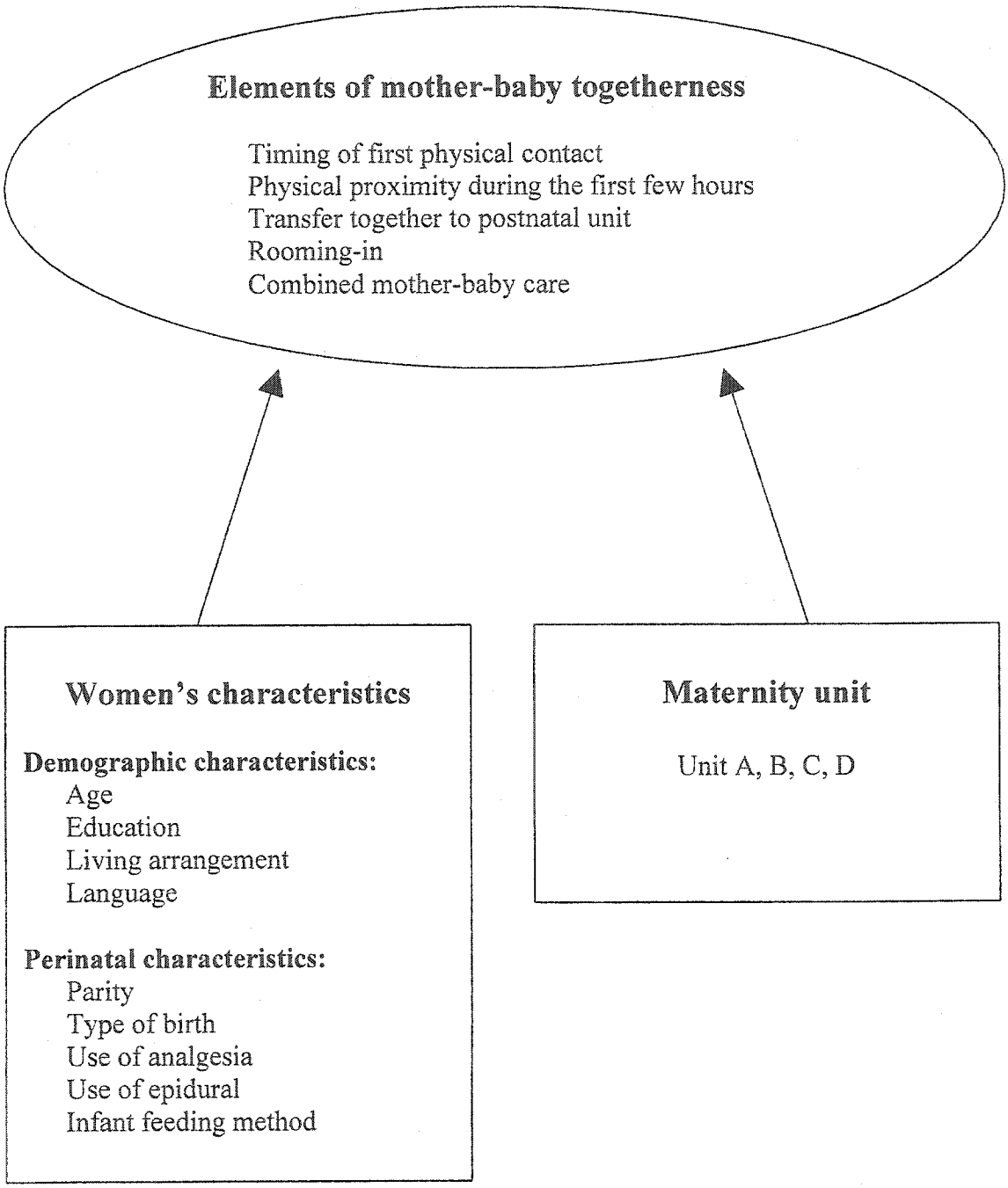


Figure 1: Study analytic framework

Operational definitions

Mother-baby togetherness: The non-separation of mother and baby and their physical interactions through touch, sight, hearing, smell or taste. It includes five elements: (a) the timing of first physical contact, (b) physical proximity during the first few hours, (c) transfer together to postnatal unit, (d) rooming-in, and (e) combined mother-baby care.

Timing of first physical contact: The length of time after birth before the mother first holds, touches or has tactile contact with her baby, with or without skin-to-skin contact.

Physical proximity during the first few hours: The non-separation of mother and baby from the moment of birth to the transfer to the postnatal unit, i.e. during the recovery period. Minimally, the baby should be in the same room as the mother or within her sight.

Transfer together to postnatal unit: The practice of transporting a mother and her baby together, from the labour and birth unit to the postnatal unit.

Rooming-in: The practice during which the baby remains with the mother all of the time. It refers to keeping the dyad in the same room.

Combined mother-baby care: A model of work organization where one nurse per shift, or one midwife, takes care of both the mother and her baby as a unit. Also known as couplet care.

Women's characteristics: The study participants' usual definition for demographic and perinatal characteristics, such as age, education, living arrangement, language, parity, type of birth, use of analgesia, use of epidural and infant feeding method.

Maternity unit: Institutional organization commonly known as hospital, where labour, birth and postnatal care and services are provided to women and their newborns. Each

unit has a mandate to provide a certain level of obstetrical care, as defined by the SOGC (2000) and Health Canada (2000a):

Level I: A community or rural hospital that provides maternity care for women with no major risk factors and normally without specialist support.

Level II: A community or regional hospital that provides care for low and high risk pregnancies with specialist support. Physicians for obstetrics and neonatal consultations should respond within 15 minutes of being called and be at the hospital within 30 minutes.

Level III: A tertiary hospital that provides care for low and high risk pregnancies, with perinatal, neonatal and anaesthetic services available on site, immediately.

Chapter Three: Methods

The current study is a secondary analysis of data collected as part of a survey on FCMNC. This chapter is divided in two sections. First, the methods used in the survey are discussed and then, the methods used for the secondary analysis. Methodological aspects pertaining to the design of this research, to the setting, sample, data collection, data analysis, limitations and to ethical considerations are presented accordingly.

The Family-Centred Maternity Care Study

Research design and setting

A survey was funded and conducted by the Public Health and Long Term Care branch of the City of Ottawa to better understand the care women received within hospital and community settings. The principal investigator was the nursing manager of the Healthy Babies Healthy Children Program, from the Public Health and Long Term Care branch. In addition, co-investigators from the fields of community health nursing, maternal and newborn care hospital administration, neonatal medicine and from faculties of nursing formed the multidisciplinary research team.

The survey covered numerous aspects of care from the beginning of pregnancy to the end of the postnatal period. Participants included women who had given birth recently and clinical managers of the four maternity units. From October 2000 to March 2001, women were interviewed by telephone on two separate occasions, at one week and at six weeks postpartum. Women answered both telephone interviews from their residence in Ottawa, reporting their experiences retrospectively. Clinical managers completed one written questionnaire during the months of April and May 2001.

Four units provide maternity care in Ottawa, including two level I centres, one level II and one level III centre. Healthcare providers interacting with mothers and babies

included nurses, family physicians, midwives, obstetricians and/or paediatricians. Characteristics of the maternity units in Ottawa for the year 2000 are summarized in Table 1. All four units had combined labour-birth-recovery rooms and a separate ward for postnatal care. All four maternity units had a regular nursery and in addition, three of them had either a special care nursery or a neonatal intensive care unit. The level II and level III units belonged to the same organization. The level III maternity unit was the regional referral centre for high-risk obstetrics.

Table 1: *Characteristics of the Four Maternity Units in Ottawa for the Year 2000*

Characteristics	Maternity units				Ottawa
	A	B	C	D	
Type of hospital	University teaching	University teaching	Community	University affiliated	
Level of care	Level II	Level III	Level I	Level I	
Number of maternity beds	37	40	20	13	Total: 110
Number of live births:	3796	3345	2038	1114	Total: 10 293
Proportion of live births < 2500 grams	7.8%	9.5%	2.1%	3.9%	*M* = 5.8%, *SD* = 3.4
Rate of caesarean births	22.1%	19.5%	20.3%	16.7%	*M* = 19.7%, *SD* = 2.2
Proportion of women using:					
Analgesia (narcotics, nitrous oxide)	30.0%	57.5%	5.0%	–	*M* = 30.8%, *SD* = 26.3
Epidural	65.0%	75.0%	75.0%	55.0%	*M* = 67.5%, *SD* = 9.6
Proportion of women breastfeeding when discharged (approximation)	90.0%	92.5%	87.5%	80.0%	*M* = 87.5%, *SD* = 5.4

Notes: Data from the clinical managers' questionnaire (see Appendix B). A dash indicates that no answer was provided.

Table 1(continued): *Characteristics of the Four Maternity Units in Ottawa for the Year 2000*

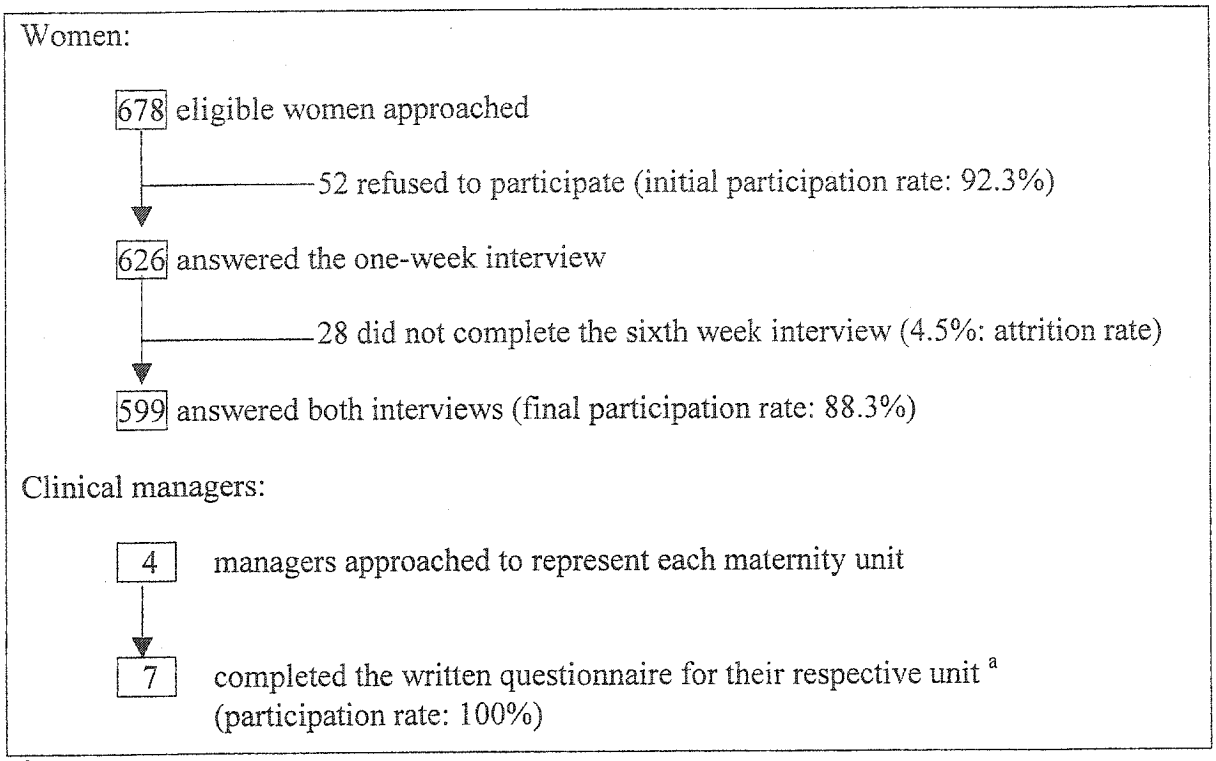
Characteristics	Maternity units				Ottawa
	A	B	C	D	
Average length of stay in hospital, all types of birth (days)	3.5	3.3	3.3	3.0	$M = 3.3$, $SD = 0.2$
Place where baby is usually put immediately after birth	On mother's abdomen	On mother's abdomen, in mother's arms, on resuscitation table if medically indicated	On mother's abdomen	On mother's abdomen, in mother's arms, on resuscitation table	
Policies facilitating physical proximity during the first few hours after birth	Yes, for an unlimited period of time	Yes, for an unlimited period of time	Yes, for an unlimited period of time	Yes, for an unlimited period of time	
Routine separation of mother and baby for transfer to postnatal unit	Hardly ever	Hardly ever	More than half the time	More than half the time	
Usual number of hours of rooming-in per 24 hours	13 – 18 $M = 15.5$	16 – 20 $M = 18.0$	18 – 24 $M = 21.0$	12 – 16 $M = 14.0$	$M = 17.1$, $SD = 3.1$
Practice of combined care	Yes	Yes	Yes	Yes and No[a]	

Notes: Data from the clinical managers' questionnaire (see Appendix B). A dash indicates that no answer was provided.
[a] As answered on the questionnaire.

Sample

The targeted sample size for the survey was 600 women which represented 80% of the 750 births estimated per month in Ottawa. Once 80% of the monthly number of births at each maternity unit was achieved, recruitment ceased for that unit. As seen in Figure 2, from a total of 678 eligible women approached, 599 answered both interviews, a participation rate of 88.3%. The sample was selected using convenience and quota sampling techniques. With convenience technique, available subjects are entered into a study until the targeted sample size is reached (Burns & Grove, 1999). To minimize selection bias from convenience sampling, quota sampling was also used. Quota sampling ensures that segments or subgroups of the population are represented in the proportions occurring naturally (Burns & Grove; Polit & Hungler, 1999). In Ottawa, including women from all four maternity units proportionately increased the likelihood that those requiring any of the three levels of obstetrical care and coming from various socio-geographical backgrounds would be represented in the sample.

Mothers were approached as per the introductory script in Appendix C. Recruitment lasted longer than the planned one-month period due to the criteria of residency. Only women who resided in Ottawa were eligible. The other inclusion criteria were that women had to return home with their babies within one week of birth, to be English or French speaking and to have a telephone. The exclusion criteria were women who had had stillbirths or neonatal deaths, women who had infants with life threatening congenital anomalies, women who had their infants up for adoption or apprehended by the Children's Aid Society.



[a] Some maternity units had more than one manager completing the questionnaire, each answering one or more parts of it.

Figure 2: Participation in the survey

Data collection

The questionnaires used during the survey are reproduced in Appendix B. All three questionnaires were based on FCMNC principles, most questions of which were previously used in two similar Canadian surveys (Hanvey et al, 1991; Levitt et al., 1995). The questionnaires were prepared by a team of experts, including one of the principal investigators from the latter surveys. They were pre-tested and revised. The questionnaires were structured self-report instruments with closed-ended and open-ended questions. A variety of response categories were used: dichotomous and multiple choices, checklists and rating questions using a five-point Likert scale.

Trained research assistants with experience in maternal and infant health issues as well as with public health surveys, conducted telephone interviews using the

questionnaires. The research assistants wrote women's answers on a paper copy of the questionnaires. A program assistant from the Community Medicine and Epidemiology Unit of the City of Ottawa entered the responses on two computer files, one for the first week interview and another file for the sixth week interview. The Statistical Packages for the Social Sciences software (SPSS) was used for data entry and to generate frequency distributions. The managers' answers were not transferred onto a computer file but remained as four hand written questionnaires.

Ethical considerations

Ethics approval was obtained from the Research Ethics Board Health Department from the City of Ottawa. Women's participation was voluntary without any effect on the care they received. They gave their consent verbally (see Appendix C). Women's time around the needs of a new baby and their postnatal tiredness were taken into account. They could stop the interview at any moment, reschedule or decline to pursue the interview. For some women, the interview might have prompted questions regarding their care or their infants' care. Accordingly, the research assistants would have referred the mother to a public health nurse for professional assistance. Women's confidentiality was guaranteed because a study identification number identified each participant. The list of names and identification numbers was kept separately from the completed questionnaires and the data files. All questionnaires, the list of names and computer files were kept in the offices of the Public Health and Long-Term Care branch of the City of Ottawa.

The current study: Secondary analysis

A secondary analysis of data from the survey was used to describe mother-baby togetherness in hospital, and the concordance of women's experiences with the FCMNC evidence-based recommendations.

Research design

The design selected for the current study was a descriptive secondary data analysis. Descriptive research provides a picture of a situation as it naturally happens (Burns & Grove, 1999; Polit & Hungler, 1999). Women reported their experiences in hospital, from birth to their return home.

Sample

A subsample of respondents was selected from the data set according to the following exclusion criteria: (a) women whose newborns were admitted to a special care or neonatal intensive care unit, (b) women whose babies weighed less than 2500 grams, (c) women who had multiple births, and (d) women who had a general anaesthesia. As shown in Figure 3, the sample size for the current study derived from the 599 women who answered both interviews and who did not meet the exclusion criteria. Once the exclusion criteria were applied, the subsample ended up as 552 women.

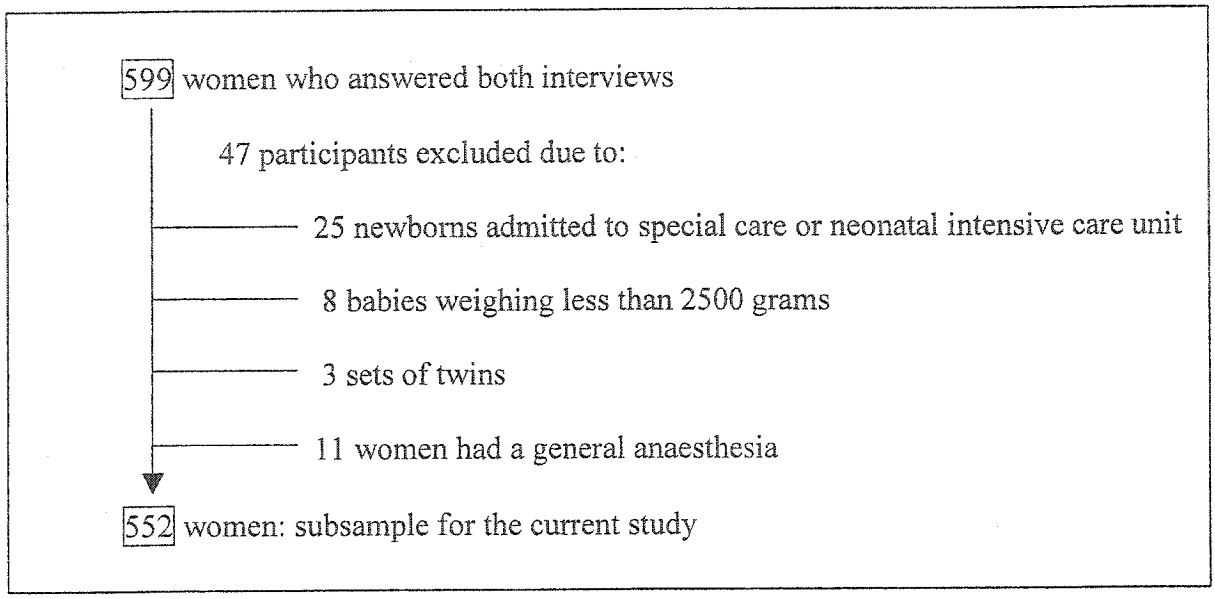


Figure 3: Sample size for the current secondary analysis study.

Data management

Components from each of the three Family-Centred Maternity Care Study questionnaires were used for this study. To achieve the specific objectives, the data describing women's postpartum experiences with mother-baby togetherness were selected from the two questionnaires at one week and at six weeks postpartum. Twenty-one questions were selected from these questionnaires, to provide all the necessary data for the 15 variables under investigation and for the exclusion criteria. These questions are framed to be identified within the questionnaires in Appendix B. The first week postnatal questionnaire provided the five variables on the elements of mother-baby togetherness and on the following four perinatal characteristics: parity, type of birth, use of analgesia and use of epidural. The sixth week postnatal questionnaire provided the other five variables on women's characteristics: age, education, living arrangement, language and infant feeding method. The variable maternity unit was obtained from the list of identification numbers and hospitals kept by the Public Health and Long Term Care branch of the City of Ottawa.

The author and another master's student, one of the co-investigators for the survey, conducted an audit to check the accuracy of the original data entry from the paper questionnaires to the computer files. Only the 21 questions relevant to the current secondary analysis were audited amongst the 599 cases. A 10% random sample was audited, with a total of 1260 entries (21 questions x 60 cases). There were 42 errors related to erroneous transcription from the paper questionnaires to the computer files. For example, something was entered 'yes' when it should have been 'no' according to the paper questionnaire. In addition, there were 120 instances of missing data on the computer files while there were data on the paper questionnaires. The 162 errors only happened in 15 of the 21 questions. The data entry error rate based on the audit was 12.9% (162 errors / 1260 entries). All 162 entry errors were changed on the computer files to match the questionnaires.

After cleaning the 10% random sample of the data, the first week questionnaire and the sixth week questionnaire files were merged into one SPSS file, using the identification number. The exclusion criteria were then applied to create the subsample. Among the subsample of 552 cases, the 15 (8280 entries) of the 21 questions with entry errors noted during the audit were checked for accuracy and corrected as required. The remaining six (3312 entries) of the 21 questions were not checked because there was not any entry error for these questions during the audit. Afterwards, the variables were relabelled to correspond to this study vocabulary.

The new definition and measurements of the variables are presented in Appendix D. Adapting variables from the data set to fit a secondary analysis and subsampling are not uncommon (Clarke & Cossette, 2000; Shepard et al., 1999). Ten of 15 variables were measured as per the survey questionnaires: timing of first physical contact, physical

proximity during the first few hours, transfer together to postnatal unit, combined mother-baby care, language, parity, type of birth, use of epidural, infant feeding method and maternity unit. To measure the variable age, a calculation was done for each of the 552 women by subtracting the date of the first interview from the mother's month and year of birth. For the variables rooming-in, education, living arrangement and use of analgesia, some recoding was done. Some choices of answers were merged to ensure mutually exclusive categories and some were collapsed to obtain sufficient numbers within each category for the statistical analyses.

The clinical managers' questionnaires provided the data to describe the setting and hospital policies.

Data analysis

Data analyses including descriptive statistics, nonparametric and parametric tests were computed using SPSS 10.0 for Windows. To illustrate the study participants' characteristics and to describe each element of mother-baby togetherness, frequency distributions were generated. Women's age was illustrated by the mean (*M*), standard deviation (*SD*) and range.

For the second objective, a description of the extent to which women's experiences were in concordance with the FCMNC guidelines, each woman's answer about the five elements of mother-baby togetherness was compared with the corresponding recommendation for best practice in postnatal care. Frequency distributions were used to illustrate women's experiences regarding the best practice recommendations for each of the five elements. The distribution of women who experienced care concordant with none to all of the recommended best practices was also presented by frequencies and percentages.

The third objective was to examine the relationship between each element of mother-baby togetherness and selected women's demographic characteristics, perinatal characteristics and maternity unit. This was done using the statistical tests Pearson chi-square (χ^2) and analysis of variance (ANOVA). Chi-square tests were used for all the nominal variables and ANOVA for the ratio variable of age. In total, 50 statistical tests were done. In view of multiple tests and to achieve a global level of significance equal to .05 (.05 / 50 = .001), the level of significance for each test was set at $p \leq .001$.

For the last objective, to identify the timing and reasons for the first separation of mothers and babies, a content analysis of relevant open-ended questions was conducted along the lines of the Krippendorff approach (1980). First, each woman's answer was coded into a uniform language. For instance, 'immediately after birth' and 'right after birth' became *immediately*; 'for the first bath', 'for bathing' and 'to be bathed' became *for bathing*. Second, expressions with the same meaning were grouped. Third, after reading the content many times, some categories emerged with themes found in the literature on mother-baby togetherness. Fourth, these categories were further grouped into mutually exclusive categories until only a few main themes remained. Finally, the current study author created frequency distribution tables to summarize the results.

Ethical considerations

The Program Planning and Evaluation Officer of the Community Medicine and Epidemiology Unit of the City of Ottawa agreed to release the data from the Family-Centred Maternity Care Study for the secondary analysis of data (see Appendix E). The Health Sciences and Science Research Ethics Board of the University of Ottawa approved the current secondary analysis (see certificate in Appendix F). The purpose of the secondary analysis respected the participants' original consent.

The current study did not involve contacting any of the women who responded to the survey. Only the data pertaining to the current study were made available to the investigator and her thesis committee members, thus maintaining confidentiality.

Chapter Four: Results

This chapter gives the study results regarding women's postpartum experiences with mother-baby togetherness in hospital, and the concordance of their experiences with the evidence-based recommendations on FCMNC. First, the characteristics of the sample are presented. Next, the frequencies of the five elements of mother-baby togetherness are described, as well as the frequencies of women's experiences with these elements and the percentage of women whose experiences concord with the postnatal FCMNC recommendations. The relationships between each of the five elements of mother-baby togetherness and selected women's demographic characteristics, perinatal characteristics and maternity unit are presented. Finally, the content analysis of women's report about the timing and reasons for the first separation from their babies is presented.

Sample

A total of 552 women met the criteria for the study. Although the sample size was $N = 552$, the number of participants answering each question related to the research variables varied from 537 to 552. Therefore the percentage of missing data by question varied between 2.7% and 0%.

Table 2 presents selected characteristics of the survey respondents included in the secondary analysis. The sample was composed of 48.6% primiparous women. Almost all women were living with a partner (91.7%) and almost half (43.7%) had a bachelor's or postgraduate degree. Women's age ranged from 17 to 44 years old ($M = 30.5$, $SD = 5.3$) and their babies weighed on average 3532.0 grams ($SD = 483.5$, range: 2500-5217 grams). Nearly one-quarter (22.3%) of the babies were born by caesarean section. During the first 48 hours, 88.6% of women were exclusively or partially breastfeeding their babies. The average length of stay in hospital postnatally was 62.4 hours ($SD = 29.3$, range: 12-216

hours), the equivalent of 2.6 days.

Table 2: *Characteristics of Women*

Characteristics	*n*	Percent	*M* (± *SD*)	Range
Maternal age[a] (years old)	-	-	30.5 (± 5.3)	17-44
Education[b]:				
Public or high school[☼]	133[☼]	24.1%	-	-
Some college or university	61	11.1%	-	-
Completed college	117	21.2%	-	-
Completed university	172	31.2%	-	-
Postgraduate degree	69	12.5%	-	-
Living arrangement[a]:				
Living with a partner	505	91.7%	-	-
Not living with a partner	46	8.3%	-	-
Language first learnt and still understood[a]:				
English	330	59.9%	-	-
French	112	20.3%	-	-
Other	109	19.8%	-	-
Parity[b]:				
Primiparous	267	48.4%	-	-
Multiparous	285	51.6%	-	-
Neonatal birth weight[c] (grams)	-	-	3532.0 (± 483.5)	2500-5217

[a] $N = 551$. [b] $N = 552$. [c] $N = 548$.

[☼] Two women reported public school as their last year completed at school: 0.4% did not have a high school education.

Table 2 (continued): *Characteristics of Women*

Characteristics	*n*	Percent	*M* (± *SD*)	Range
Type of birth[b]:				
Vaginal (spontaneous or instrumental)	429	77.7%	-	-
Caesarean section	123	22.3%	-	-
Use of analgesia (narcotics or nitrous oxide)[b]:				
Yes	166	30.1%	-	-
No	386	69.9%	-	-
Use of epidural[b]:				
Yes	418	75.7%	-	-
No	134	24.3%	-	-
Infant feeding method during the first 48 hours[b]:				
Breastfeeding	346	62.7%	-	-
Bottle feeding	63	11.4%	-	-
Mixed feeding	143	25.9%	-	-
Length of stay in hospital (days)[d]	-	-	2.6 (± 1.2)	0.5-9.0

[a] $N = 551$. [b] $N = 552$. [c] $N = 548$. [d] $N = 549$.

Description of the frequency of the five elements of mother-baby togetherness

Research objective 1: To describe the frequency of (a) the timing of first physical contact, (b) physical proximity during the first few hours, (c) transfer together to postnatal unit, (d) rooming-in, and (e) combined mother-baby care reported by women.

Table 3 presents the frequencies for each element of mother-baby togetherness in a descending order of percentages. During their postnatal stay in hospital, a large proportion of mother-baby dyads were taken care of by one nurse per shift (84.6%). Most women first held or touched their baby immediately after birth (62.8%). Most babies stayed within their

mother's physical proximity during the first few hours after birth (62.6%). However, once women and their babies had left the labour and birth unit, togetherness was less frequent. Forty-two percent (41.7%) of mothers and babies were moved together when transferred to the postnatal unit. One-third (33.9%) of mother-baby dyads roomed-in 24 hours a day.

Table 3: *Frequency of the Elements of Mother-Baby Togetherness Reported by Women*

Elements of mother-baby togetherness	Frequency	Percent
Combined mother-baby care [a]:		
One nurse for both the mother and her baby, per shift*	**456**	**84.6%**
Two different nurses for the mother and her baby, per shift	83	15.4%
Timing of first physical contact [b]:		
Immediately after birth*	**345**	**62.8%**
Within 10 minutes	98	17.9%
Within ½ hour	45	8.2%
More than ½ hour later	61	11.1%
Physical proximity during the first few hours [c]:		
Baby stayed with the mother*	**345**	**62.6%**
Baby did not stay with the mother	206	37.4%
Transfer together to postnatal unit [d]:		
Mother and baby moved to postnatal unit together*	**224**	**41.7%**
Mother and baby separated during transfer	313	58.3%
Rooming-in [c]:		
24 hours*	**187**	**33.9%**
Not all of the time	364	66.1%

[a] $N = 539$. [b] $N = 549$. [c] $N = 551$. [d] $N = 537$, eight women did not answer this question as they were not moved to another room after birth.
* Best practice recommendations on FCMNC.

Women's experiences with mother-baby togetherness and their concordance with FCMNC

Research objective 2: To describe the extent to which women's experiences with the five elements of mother-baby togetherness concord with the evidence-based postnatal recommendations on FCMNC.

The extent to which women experienced mother-baby togetherness in hospital is shown in Table 4. The best practice recommendations on FCMNC used in Table 4 are identified in Table 3 by an the asterisk (*). The higher the number of elements reported in line with the best practice recommendations, the more women's experiences with mother-baby togetherness were in concordance with FCMNC. Postnatal care in hospital was in full concordance with FCMNC for 8.8% of women since they experienced care which included all five elements of mother-baby togetherness. Nearly two-thirds of women (62.1%) reported three or more best practice elements in the care they received during their postnatal stay in hospital. Twelve women (2.3%) reported experiencing none of the recommendations for best practice regarding mother-baby togetherness.

Table 4: *Frequency of Best Practice Recommendations Reported by Women*

Number of recommendations for best practice experienced by women	Frequency	Percent	Cumulative percent
5	46	8.8%	8.8%
4	128	24.6%	33.4%
3	149	28.7%	62.1%
2	122	23.5%	85.6%
1	63	12.1%	97.7%
0	12	2.3%	100%

Note: $N = 520$ since 32 women did not answer one of the five questions regarding the elements of mother-baby togetherness.

To describe in further detail the extent to which women's experiences with the five elements of mother-baby togetherness were in concordance with the FCMNC best practice recommendations, additional analyses were conducted to assess whether or not certain patterns of practices existed overall and within each maternity unit. As seen in Appendix G, the most frequent pattern overall was that 11.4% of women experienced all the elements except rooming-in. The most frequent combinations of patterns were different between maternity units.

Relationship between mother-baby togetherness, women's characteristics and maternity units

Research objective 3: To examine the relationship between each of the five elements of mother-baby togetherness and selected women's demographic characteristics, perinatal characteristics and four maternity units.

Each of the five elements of mother-baby togetherness was examined in relation to each selected women's characteristics and in relation to maternity unit, as illustrated by the schematic representation of the research variables in Figure 1. Three tables in Appendix H present the detailed results of the statistical analyses. Twelve associations were statistically significant ($p \leq .001$) as indicated with a '√' and summarized in Table 5. Maternity unit was the only variable that was statistically significantly related to all five elements of mother-baby togetherness. Tables 6, 7, 8, 9 and 10 present all the significant relationships under the heading of each element of mother-baby togetherness. None of the elements were found to be significantly related to education, living arrangement, parity, use of analgesia and use of epidural.

Table 5: *Significant Relationships Between the Research Variables*

	Timing of first physical contact (Earlier contact)	Physical proximity during the first few hours (No separation)	Transfer together to postnatal unit	Rooming-in (On a 24 hour basis)	Combined mother-baby care
Demographic characteristics:					
Age (younger women)	√	-	-	-	-
Education	-	-	-	-	-
Living arrangement	-	-	-	-	-
Language (English)	-	-	-	-	√
Perinatal characteristics:					
Parity	-	-	-	-	-
Type of birth (vaginal birth)	√	√	-	√	-
Use of analgesia	-	-	-	-	-
Use of epidural	-	-	-	-	-
Infant feeding method (breastfed during the first 48 hours)	-	√	-	√	-
Maternity unit:					
A	-	√	√	-	-
B	-	-	-	√	√
C	-	-	-	-	-
D	√	-	-	-	-

Timing of first physical contact

The timing of first physical contact was significantly related to women's age, the type of birth and maternity unit. Younger women held their babies significantly earlier after birth than older women (F (3, 544) = 5.4, p = .001) (see Appendix H, Table H1). Mothers giving birth vaginally were more likely to hold or touch their babies immediately after birth (74.0%) than mothers giving birth by caesarean section (23.8%) (χ^2 (3, N = 549) = 151.5, p = .000) (see Table 6). Women having babies at maternity unit D were more likely to hold or touch their babies immediately after birth (78.4%) (χ^2 (9, N = 549) = 43.4, p = .000).

Table 6: *Timing of First Physical Contact and Type of Birth and Maternity Unit*

Timing of first physical contact	Type of birth		Maternity unit			
	Vaginal	Caesarean	A	B	C	D
Immediately after birth	74.0%	23.8%	49.5%	63.4%	72.7%	78.4%
Within 10 minutes	16.9%	21.3%	25.3%	20.9%	9.1%	6.7%
Within ½ hour	5.4%	18.0%	13.7%	8.1%	3.3%	2.7%
More than ½ hour later	3.7%	36.9%	11.5%	7.6%	14.9%	12.2%
χ^2 [a]	(3, N = 549) = 151.5		(9, N = 549) = 43.4			

[a] p = .000.

Physical proximity during the first few hours

Physical proximity during the first few hours was significantly related to the type of birth, the infant feeding method and maternity unit. Table 7 presents the proportion of women who did and did not experience physical proximity during the first few hours, with each of the variables for which a statistically significant difference emerged. There was a significant difference in mothers' physical proximity with their babies and the type of birth (χ^2 (1, N = 551) = 40.3, p = .000). Women giving birth vaginally were more likely to have their babies with them during the first few hours after birth (69.6%) than babies born by caesarean section (38.2%). In addition, women who breastfed during the first 48 hours were more likely to be with their babies soon after birth (69.0%) than women who were mixing breastfeeding and bottle feeding or exclusively bottle feeding (χ^2 (2, N = 551) = 18.7, p = .000). Babies born in maternity unit A were more likely to remain with their mothers during the first few hours (79.8%) (χ^2 (3, N = 551) = 35.2, p = .000).

Table 7: *Physical Proximity and Type of Birth, Infant Feeding Method and Maternity Unit*

Physical proximity during the first few hours	Type of birth		Infant feeding method			Maternity unit			
	Vaginal	Caesarean	Breast-feeding	Bottle feeding	Mixed feeding	A	B	C	D
Baby stayed with the mother	69.6%	38.2%	69.0%	60.3%	48.3%	79.8%	52.6%	53.7%	58.1%
Baby did not stay with the mother	30.4%	61.8%	31.0%	39.7%	51.7%	20.2%	47.4%	46.3%	41.9%
χ^2 [a]	(1, N = 551) = 40.3		(2, N = 551) = 18.7			(3, N = 551) = 35.2			

[a] p = .000.

Transfer together to postnatal unit

Separation at the time of transfer to the postnatal unit was significantly related to maternity unit (χ^2 (3, N = 537) = 94.8, p = .000) (see Table 8). Mothers and babies in maternity unit A were more likely to be moved together to the postnatal unit (69.4%).

Table 8: *Transfer Together to Postnatal Unit and Maternity Unit*

Transfer together to postnatal unit	Maternity unit			
	A	B	C	D
Mother and baby moved together	69.4%	19.7%	36.4%	33.3%
Mother and baby separated for transfer	30.6%	80.3%	63.6%	66.7%
χ^{2} [a]		(3, N = 537) = 94.8		

[a] p = .000.

Rooming-in

Rooming-in was significantly related to the type of birth, the infant feeding method and maternity unit. Table 9 presents the proportion of women who roomed-in 24 hours a day or not, with each of the variables for which a statistically significant result emerged. Mothers giving birth vaginally were more likely to have roomed-in 24 hours a day (40.7%) than mothers giving birth by caesarean section (10.6%) (χ^2 (1, N = 551) = 38.6, p = .000). Women who breastfed during the first 48 hours were more likely to room-in 24 hours a day (42.9%) (χ^2 (2, N = 551) = 33.2, p = .000). In addition, women giving birth at maternity unit B were more likely to room-in (65.1%) (χ^2 (3, N = 551) = 118.7, p = .000).

Table 9: *Rooming-In and Type of Birth, Infant Feeding Method and Maternity Unit*

Rooming-in	Type of birth		Infant feeding method			Maternity unit			
	Vaginal	Caesarean	Breast-feeding	Bottle feeding	Mixed feeding	A	B	C	D
24 hours	40.7%	10.6%	42.9%	20.6%	18.2%	26.2%	65.1%	18.9%	5.4%
Not all of the time	59.3%	89.4%	57.1%	79.4%	81.8%	73.8%	34.9%	81.1%	94.6%
χ^2 [a]	(1, N = 551) = 38.6		(2, N = 551) = 33.2			(3, N = 551) = 118.7			

[a] p = .000.

Combined mother-baby care

Combined mother-baby care was significantly related to women's first learnt and still understood language and to maternity unit. Table 10 presents the proportion of women who had experienced combined care or not, with each of the variables for which a statistically significant result emerged. Women who first learnt and still understood English were more likely to have one nurse per shift to take care of them and their babies (89.8%) (χ^2 (2, N = 538) = 18.3, p = .000). There was also a significant difference between the four maternity units (χ^2 (3, N = 539) = 49.3, p = .000). Women giving birth at maternity unit B were more likely to benefit from combined mother-baby care during each shift (94.1%).

Table 10: *Combined Mother-Baby Care and Language and Maternity Unit*

	Language			Maternity unit			
Combined care, per shift	English	French	Other	A	B	C	D
One nurse for both the mother and her baby	89.8%	73.6%	80.2%	86.4%	94.1%	84.2%	58.9%
Two different nurses for the mother and her baby	10.2%	26.4%	19.8%	13.6%	5.9%	15.8%	41.1%
χ^2 [a]	(2, N = 538) = 18.3			(3, N = 539) = 49.3			

[a] p = .000.

In view of the statistically significant results between the variables combined mother-baby care and language, and in view of the clientele's linguistic characteristics within each maternity unit, additional χ^2 tests were performed. The results are presented in Appendix H, Table H4. There was no significant relationship between combined care and maternal language within each maternity unit. Therefore, the proportion of mothers and

babies to have been taken care of by one nurse per shift was related to the maternity unit and not to the mother's language.

First separation of mother and baby

Research objective 4: To identify when mothers and babies are separated for the first time and the reasons for this reported by women.

Women were asked if they were separated from their babies at all while in hospital. Figure 4 illustrates women's reports of the first separation between mother and baby. Twenty-two women answered that they were not separated and one said she wasn't sure if she had been separated from her baby. Therefore, almost all women (529/552 = 95.8%) were separated at least once from their babies. Most women reported a timing (439/529 = 83.0%) and almost all of them reported a reason (509/529 = 96.2%) for their first separation.

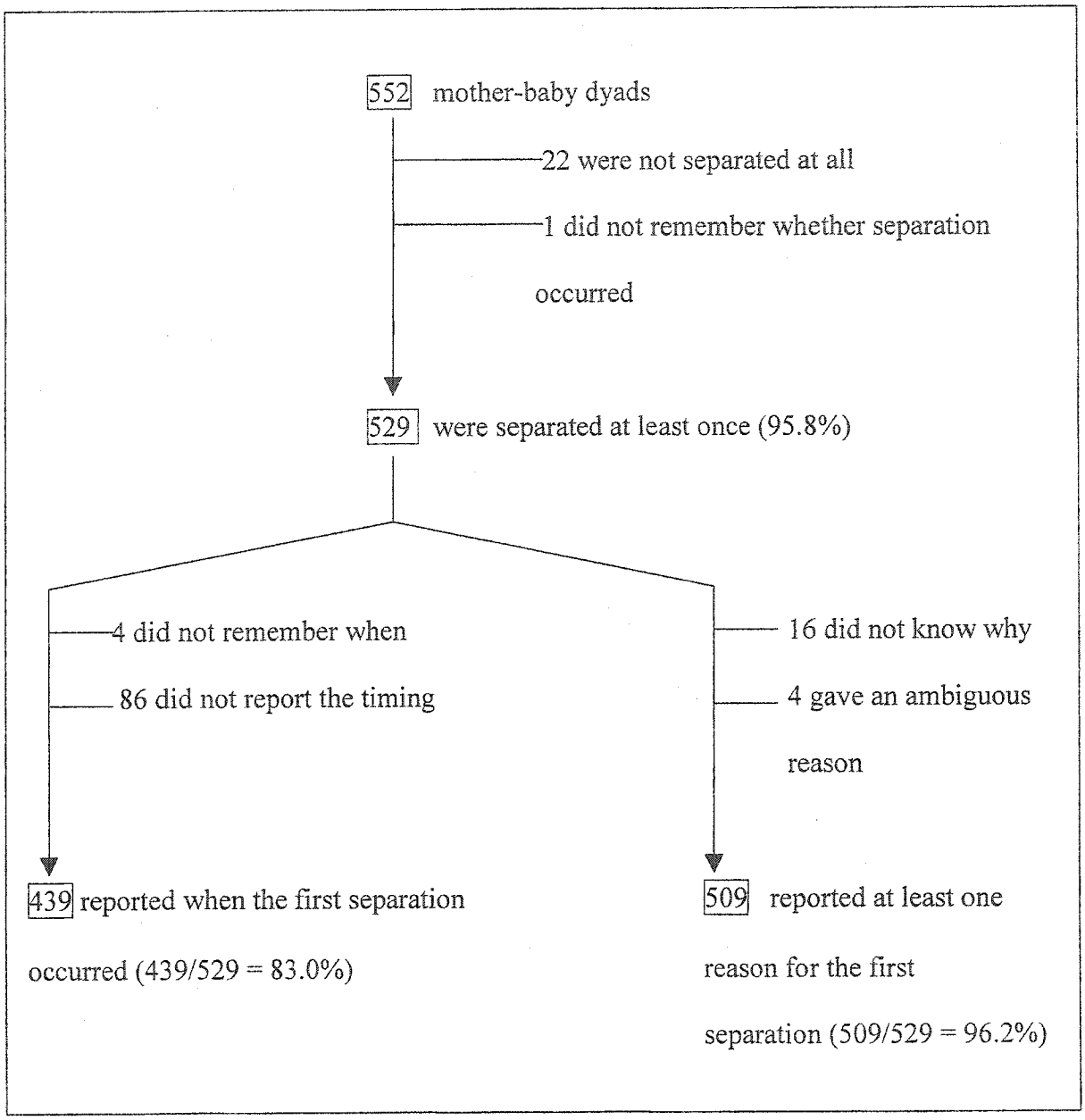


Figure 4: First separation of mother and baby reported by women

Timing of the first separation

Amongst the 439 women who reported when they were first separated from their babies, 335 reported a number of minutes or hours after birth and 104 used words to explain their answer. The combined numerical and worded answers are presented in Table 11. For the vast majority of women (74.0%), the first separation from their babies occurred during the first four hours after birth, half of them (40.3%) being within the first hour.

Table 11: *Timing of the First Separation Between Mother and Baby Reported by Women*

Category	Numerical and worded answers reported	Frequency *n*	Frequency Total	Percent	Cumulative percent
Within the first hour:	1 to 60 minutes	138	177	40.3%	40.3%
	A few minutes later	4			
	At birth	5			
	Immediately	19			
	Within first hour	7			
After 1 hour and up to 4 hours:	1.5 to 4.0 hours	145	148	33.7%	74.0%
	A few hours later	3			
More than 4 hours later:	5.0 to 24.0 hours	52	79	18.0%	92.0%
	Day after birth	5			
	First evening	1			
	First night	13			
	Second night	3			
	Several hours later	5			
Other:	At night	32	35	8.0%	100%
	First 24 hours	1			
	When moved to room	2			

Note: $N = 439$.

Reasons for the first separation

The 509 women who reported a reason for the first separation from their babies gave a total of 722 reasons. One-hundred and forty women gave more than one reason. Following the content analysis, the reasons reported by women were finally coded into two main categories as presented in Table 12. More than two-thirds of the reasons (496/722 = 68.7%) were related to the baby and 31.3% were related to the mother. Details of the

preceding categories from the content analysis are available in Appendix I, in a descending order of frequency.

For the baby, 55.8% of all the reasons for the first separation were routines performed in the nursery, such as the initial assessment, the baby's first bath and monitoring for a few hours. Neonatal medical circumstances were cited for 9.6% of all the reasons. For the mother, the most frequent reasons were to let her recover from her tiredness (20.6%). Maternal medical circumstances were cited for 7.2% of all the reasons for the first separation.

Table 12: *Reasons for the First Separation Between Mother and Baby Reported by Women*

Main category	Reasons	Frequency (*n*)	Percent within each category	Percent[a]
Baby				
	Routines performed in the nursery:	403	81.3%	55.8%
	Assessment and procedures (184)			
	Bathing (119)			
	Observation (100)			
	Medical circumstances:	69	13.9%	9.6%
	Cardio-respiratory system (27)			
	Thermo-regulation (19)			
	Metabolism (15)			
	Prematurity (5)			
	Other (3)			
	No specific reason	18	3.6%	2.5%
	Other reasons	6	1.2%	0.8%
	Total	**496**	**100%**	**68.7%**
Mother				
	Tiredness	149	65.9%	20.6%
	Medical circumstances:	52	23.0%	7.2%
	Caesarean birth (25)			
	Complications (21)			
	Restricted mobility (6)			
	Mother's choice	16	7.1%	2.2%
	Hospital practices	9	4.0%	1.3%
	Total	**226**	**100%**	**31.3%**

[a] Over a total of 722 reasons

Summary of the main findings

Rooming-in on a 24 hour basis was the element of mother-baby togetherness the least frequently experienced by women (33.9%). Less than half the women (41.7%) were transferred with their babies to the postnatal unit. On the other hand, combined mother-baby care was the element that most women experienced (84.7%). Women who had a caesarean birth were the least likely to hold their babies immediately after birth (23.8%), to be physically close to their babies during the first few hours (38.2%) and to room-in (10.6%). Women who breastfed during the first 48 hours were more likely to be physically close to their babies during the first few hours (69.0%) and to room-in (42.9%).

In large part, women's experiences were not in keeping with the FCMNC recommendations. Only 8.8% of women experienced care including all five elements of mother-baby togetherness. There is a gap between the FCMNC recommendations on mother-baby togetherness and practices in maternity units.

There were significant differences between the four maternity units and each of the elements of mother-baby togetherness. Women from unit A were the most likely to be physically close to their babies during the first few hours after birth (79.8%) and to be transferred to the postnatal unit with their babies (69.4%). Women from unit B were the most likely to room-in 24 hours a day (65.1%) and to benefit from combined mother-baby care (94.1%). Women from unit D were the most likely to hold or touch their babies immediately after birth (78.4%).

Forty percent (40.3%) of women reported being separated for the first time from their babies within the first hour. The most frequently reported reasons for the first separation were routines pertaining to the baby and performed in the nursery (55.8%), and

maternal tiredness (20.6%). Maternal and neonatal medical circumstances accounted for 16.8% of all the reasons for the first separation.

Chapter Five: Discussion

This chapter presents an interpretation of the main findings followed by the limitations and strengths of the study. Finally, recommendations regarding the practice environment, healthcare providers and for future research are discussed.

Interpretation of the main findings of mother-baby togetherness

Low frequency of rooming-in

Rooming-in on a 24 hour basis was experienced by only 33.9% of women. This rate is low compared to a decade ago in Ontario, where 64% of maternity units reported that mothers and babies roomed-in 19 to 24 hours a day (Levitt et al., 1995). Compared to a recent survey of women's childbearing experiences in the United States, the rate of 24 hour rooming-in in the current study is also low. Among the 1583 American women surveyed by Declercq et al. (2002), 62% of them roomed-in 24 hours a day. In the current study, there are two major factors explaining the low frequency of rooming-in: separation during the night and separation following a caesarean birth.

Separation during the night occurred for nearly half the women. In fact, 47.4% of women reported rooming-in during the day only throughout their hospital stay. In previous studies, separation during the night has been linked to hospital policies, women's preferences and nurses' perceptions (Bajo et al., 1998; Walderström & Swenson, 1991). Some nurses are reluctant to entrust babies to their mothers, particularly on the first night, and believe that they help mothers sleep better when babies are in the nursery (Ecenroad & Zwelling, 2000; Walderström & Swenson). In Ottawa, the regional committee for 24-hour combined mother baby care has discussed that it is difficult to reinforce rooming-in at night because of nurses' beliefs and their desire to help mothers, and because of mothers' request for nursery care. Similarly, the nurse manager and nurse educator from maternity units A

and C gave similar explanations for separation at night, although these units had a 24 hour rooming-in policy. Maternity unit B limited its 24 hour rooming-in policy to women who had a vaginal birth, whereas unit D did not support rooming-in at night. The data from the current study can not differentiate between unit policy, nurses' beliefs nor women's request. Future research needs to study the relationships between these factors and the rate of 24 hour rooming-in.

Separation following a caesarean birth contributed to some extent to the low proportion of dyads who roomed-in 24 hours a day, because 22.3% of the study participants had a caesarean birth. Among those who gave birth by caesarean, as few as 10.6% of women roomed-in 24 hours a day compared to 40.7% of those who gave birth vaginally. According to the results from Declecq et al. (2002), 45% of American women roomed-in 24 hours a day after a caesarean birth compared to 60% of those who had a vaginal birth. The frequencies of 24 hour rooming-in were much lower in Ottawa than in the United States and the contrast between caesarean and vaginal births was much more considerable. A study comparing women who gave birth by caesarean and those who gave birth vaginally is required to know women's needs and preferences regarding rooming-in during the first day and night.

Separation following a caesarean birth

Women who had a caesarean birth were less likely not only to room-in, but also to be physically close to their babies during the first few hours after birth. In fact, 61.8% of babies born by caesarean did not stay with their mothers during the first few hours after birth. Women who had a caesarean birth were also less likely to hold or touch their babies immediately after birth. This finding is consistent with previous studies which have shown that women who give birth by caesarean are in contact with their babies for the first time

much later than those who give birth vaginally (DiMatteo et al., 1999; Hedberg et al., 1997; Rowe-Murray & Fisher, 2002).

Medical circumstances following a caesarean birth does not explain the fact that mothers and babies are more likely to be separated following a caesarean birth, during the first few hours after birth and during the postnatal period in hospital. According to Health Canada (2000a), evidence shows that hospitals with high rates of caesarean birth have the same proportion of neonatal admissions to special care units, and babies have similar Apgar scores than those units with low rates of caesarean births. The high proportion of separation following a caesarean birth in Ottawa is partially due to policies. For instance, unit B routinely separated mothers and babies after a caesarean birth, at least during the first night. In view of the overall high separation rates following a caesarean birth in Ottawa, it is reasonable to conclude that all maternity units had the same practice of separating mothers and babies following a caesarean birth. Hospital protocols and practices which affect mother-baby contact can have adverse psychological impact on the mother's mood postnatally (Rowe-Murray & Fisher, 2001). Furthermore, women who have a caesarean birth have less positive reaction to their babies after birth and interact with them less than women who have a vaginal birth (DiMatteo et al., 1999). Therefore, mothers and babies should be kept together in order to give women a better chance to improve their psychological well-being and interactions with their babies after a caesarean birth. The non-separation of mothers and babies following a caesarean birth should be reflected in hospital protocols and practices.

Low frequency of transfer together to postnatal unit

In the current study, only 41.7% of women experienced being transferred to the postnatal unit with their babies. This rate is lower than it was in maternity hospitals in

Ontario over a decade ago, where 55% of managers reported that mothers and healthy babies were routinely transferred together to the postnatal unit (Hanvey et al., 1991). No explanation was provided in the survey by Hanvey et al.. In the current study, data were collected about the timing and reasons for the first separation and provide some explanation for the low frequency of dyads being transferred together.

Over half (55.8%) the women experienced their first separation when their babies went to the nursery for routines such as the first bath, the initial examination, admission procedures and observation. The results are consistent with an American survey where half of the maternity units still had routines related to bath, temperature stabilization, admission and assessment in the nursery during the first few hours after birth (Bajo et al., 1998). According to Medves and O'Brien (2001), in many Canadian hospitals babies are routinely bathed within the first couple of hours after birth. In Ottawa, 74.0% of women were first separated within the first four hours after birth. The four hour period corresponds mainly to a routine observation period for healthy newborns (Hanvey, Levitt & Chance, 1996). Furthermore, the first four hours correspond also to a period when transfers to the postnatal unit usually occur. Based on the literature and on the reasons and timing that women reported for their first separation, babies' routine care performed in the nursery explains in large part the fact that most mothers and babies were not transferred together to the postnatal unit.

Variations according to the maternity unit

There were some statistically significant variations between each element of mother-baby togetherness and the maternity units in Ottawa. An analysis of the patterns of all combinations of the elements of mother-baby togetherness indicates that practices varied according to the unit where women gave birth (see Appendix G). Therefore the

conservative ($p \leq .001$) statistical results and the patterns of combinations both corroborate that practices vary between maternity units in Ottawa. The findings are consistent with research evidence showing that hospital practices vary considerably between units and depend "more on the hospital in which a mother happens to give birth, ..., than on her individual needs." (Enkin et al., 2000, p. 432).

Concordance with the FCMNC recommendations

In large part, women's experiences were not in keeping with the FCMNC recommendations, since only 8.8% of them experienced care including all five elements of mother-baby togetherness. If all women were rooming-in 24 hours a day and were transferred with their babies to the postnatal unit, a total of 28.7% of all women would receive care which includes the five elements of mother-baby togetherness, as per the best practice recommendations on FCMNC (see Appendix G). Therefore the gap between the FCMNC recommendations and practice could be reduced by 19.9% by specifically targeting rooming-in and transfer together to postnatal unit.

The gap between some evidence-based recommendations and postpartum practices was highlighted in another study about breastfeeding. In the United States, DiGirolamo et al. (2001) selected five Baby-Friendly practices of the WHO's Ten Steps to Successful Breastfeeding and assessed the number of practices experienced by 1085 women who gave birth in hospital. The study revealed that only 7.2% of women experienced all five practices. The results from the current Canadian study are similar to those from the American study by DiGirolamo et al., indicating that many women do not experience care that is supported by recommendations endorsed by prominent health care organizations.

Gap between the FCMNC recommendations and practice

The gap between the FCMNC recommendations and practice might be due to

several factors. These factors include the discrepancy between individual maternity unit policies and practice or between the Health Canada (2000a) recommendations and the individual unit policies. Barriers might also include nurses' or physicians' attitudes, or women's preferences, or the unit level of care.

There are discrepancies between policies and practice in three of the four maternity units in Ottawa. In maternity unit A (level II), women were the least likely to hold or touch their babies immediately after birth. Despite the unit manager indicating that babies are usually put on their mothers' abdomen immediately after birth, this was not reported by women as their experiences. In unit B (level III), women were the least likely to be physically close to their babies during the first few hours and to be transferred together to the postnatal unit. Despite the unit manager indicating that there was a policy facilitating physical proximity during the first few hours after birth for an unlimited period of time, and that dyads were hardly ever separated for transfer to the postnatal unit, women's experiences were different. In unit C (level I), women were not the most nor the least likely to experience care based on best practice. Nonetheless, the rate of 24 hour rooming-in was only 18.9%, despite the highest usual number of hours of rooming-in per 24 hours ($M = 21.0$) reported by the unit managers.

In contrast to the other three units, the gap in unit D (level I) is not between policies and practice, but rather between the Health Canada (2000a) FCMNC recommendations and unit policies. Women who gave birth in unit D were the least likely to room-in and to experience combined mother-baby care. This was consistent with the unit manager's report. Therefore, unit D did not have an up-to-date evidence-based policy regarding rooming-in and combined mother-baby care.

Hospital practices and policies play an important role in limiting mother-baby

contacts (Ashmore, 2001; Bajo et al., 1998; Declercq et al., 2002; Hedberg et al., 1997; Rowe-Murray & Fisher, 2002). Despite appropriate policies or the FCMNC recommendations supporting unlimited contacts between mothers and babies, care did not meet the recommended best practice. The lack of congruence between policies and practices, as well as variations between units, might depend on individual healthcare providers' beliefs, on medical habits or on institutional structure and routines (Carr & Schott, 2002). The gap and variations might also depend on women's preferences. Some women may not want continuous contact with their babies. Their unwillingness to comply with the best practice recommendations may discourage health care providers from applying their unit policies based on best practice (Logan & Graham, 1998). Future research needs to examine how to align women's preferences with best practice.

In high risk environments, facilitating mother-baby togetherness might not be seen as a priority. Surprisingly, results from the current study reveal that the level II and level III units performed better with mother-baby togetherness than the two level I units. Therefore, the level of obstetrical risk is not a prime explanation for the gap between policies and practice and for variations between maternity units in Ottawa. This conclusion is consistent with results from an Australian survey of women who gave birth in level II and level III units (Zadoroznyj, 1996). According to Zadoroznyj, women's experiences with maternity care is related more to organisational factors than to level of care.

Breastfeeding

The infant feeding method was related to two elements of mother-baby togetherness. Dyads who breastfed during the first 48 hours were more likely to have remained together after birth and to have roomed-in 24 hours a day, compared to dyads who used bottle feeding exclusively or mixed with breastfeeding. Evidence shows that

keeping mothers and babies together is beneficial to breastfeeding initiation and duration (Enkin et al., 2000; WHO, 1998). With the current study, it is difficult to ascertain whether it is being together that helped breastfeeding or whether breastfeeding encouraged less separation. It is not known which one comes first. Furthermore, would dyads who mixed breastfeeding and bottle feeding have breastfed fully, had they not been separated? There is no answer from the current study and more research is needed on infant feeding methods, as a health outcome of not separating mothers and babies.

Limitations and strengths

Reliability and internal validity

One of the common issues in secondary analysis is the shortcoming of the original instrument in matching the variables under study (Clarke & Cossette, 2000). Consequently, the categories for some variables selected for the current study were coded to match the objectives. The independent variables selected were limited to those available from the original instrument. However, the five questions regarding the five elements of mother-baby togetherness corresponded very well to the five dependent variables under investigation.

As can be expected in a secondary analysis, there was no input into the design of the questionnaires to specifically match the current study on mother-baby togetherness. However, the questionnaires were designed according to the FCMNC national guidelines. The current study and the questionnaires rest on the same up-to-date FCMNC philosophy and research evidence, which is a great asset for a secondary analysis. Therefore, the questionnaires reflect current thinking about the concepts under study, as they should do (Clarke & Cossette, 2000).

The questionnaires were written by Louise Hanvey, an experienced researcher in

women's and children's health and social policy. They were also based on previous surveys by Hanvey et al. (1991) and by Levitt et al. (1995) regarding FCMNC. The questionnaires were pre-tested and revised by a multidisciplinary team before the survey was conducted.

Another common issue in secondary analysis is the quality of the data set (Clarke & Cossette, 2000). When the Public Health and Long Term Care branch of the City of Ottawa authorized the use of their data set, there had not been any audit conducted to assess the quality of entry of the data. Therefore, the data set used in this secondary analysis was thoroughly verified and all entry errors were corrected. There were very little missing data. Seven of the 15 variables did not have any missing data. Among the eight other variables, the highest rate of missing data per variable was only 2.7%. This is far from the less than 15% of missing data for a variable, considered acceptable in the methodological literature (Clarke & Cossette).

All survey research is susceptible to bias. The interviewers might have selected the wrong category or might not have entered women's exact words for the open-ended questions. Such biases can not be ruled out, but the fact that the interviewers were trained and experienced in public health surveys reduces the likelihood of these biases. Some women might have introduced a social desirability response bias by answering what they thought was the norm or what the interviewer wanted to hear (Polit & Hungler, 1999). The context in which women answered the telephone interviews may also have induced some bias. The questionnaires were lengthy and mothers with a very young baby might have become tired. Their attention might have been diverted by other things that were going on around them at the same time.

The low attrition rate (4.5%) at six weeks postpartum indicates that women

participated willingly. The survey might even have been beneficial to their emotional well-being. It is well known that postnatally, many women wish to talk about their experiences (Wray & Benbow, 2001). Furthermore, the attrition rate is well below the acceptable rate of 20%, which is a strong asset for the study (Polit & Hungler, 1999).

Recall bias may have been a problem with the survey, as women answered the questions reflecting retrospectively on their experiences. Some of their answers might have been inaccurate or altered by other experiences since then. By conducting the first interview one week postnatally, the survey investigators wanted to receive feedback from women soon after their labour, birth and postpartum experiences in hospital. This short period of time between events and data collection has the advantage of minimizing bias from women's recall. In a prospective longitudinal study by Rowe-Murray and Fisher (2001; 2002), women's reports at two days postpartum were compared with medical records. Although mistakes could occur in either source, 91% of cases showed complete agreement, indicating women's recall to be a reliable source of data on events surrounding birth. Other authors who conducted large retrospective surveys have reported that women's recall of events related to childbirth are accurate overtime, even two years after the events (Declercq et al., 2002; Zadoroznyj, 1996).

Conducting the interviews at one week and six weeks postpartum limits the depth of women's reflection on their experiences. The lasting and deep meaning of women's experience cannot be captured within the first week postbirth (Bondas-Salonen, 1998). Sometimes women hesitate to criticize their care so early after the events, thus justifying a much later follow-up (Hansen Cottrell & Grubbs, 1994). With time, women become more critical of their care as the so-called 'halo effect' dissipates (Zadoroznyj, 1996). Appropriately, an open-ended question encouraging women to make any comments they

wished was left as the last item on the sixth week questionnaire.

The data is entirely based on women's self-report, not on observable care practices. However, reliance on self-report in "the absence of data to show that the measure actually corresponds with direct observation" (Cone & Foster, 1993, p. 246) is a common practice.

Generalizability

There was an excellent participation rate for both interviews. In fact, the goal of 80% participation rate for the Family-Centred Maternity Care study was surpassed with 92.3% of women who answered the one week questionnaire and 88.3% who participated in both the one and six week interviews. In addition, the study gives a full regional perspective because all maternity units in Ottawa were included. All levels of care were also represented, which provided a sample from a broad spectrum of the perinatal population. The study is likely generalizable to the region and to other regions with similar demographic characteristics.

A self-selection bias might have occurred, but since non-respondents' characteristics are not known, a comparison can not be drawn between the participants and non-respondents. Nonetheless, the sampling method used in the survey gave a proportionate and representative sample of the regional childbearing population in Ottawa. Furthermore, the characteristics of the sub-sample of women from the current study are a close match to women from the perinatal data for the year 2001 in Ottawa (City of Ottawa, 2003). Maternal mean age and the rates of primiparity, caesarean section, use of epidural, and breastfeeding were nearly identical between the study participants and the perinatal population. However, the study participants used more analgesia than the population (30.1% vs 16.1%). Their babies weighed on average 100 grams heavier, which is likely due to the exclusion criteria of babies weighing less than 2500 grams. It is doubtful

whether these differences would have a meaningful clinical significance on mother-baby togetherness. Therefore the study is generalizable to the childbearing population in Ottawa.

Women's education level was high. More specifically, 64.9% of women from this study had completed college or university. This is not surprising because Ottawa has the most highly educated population in Canada, with almost 50% of the residents holding a post-secondary degree, certificate or diploma (City of Ottawa, 2002). Nearly all women (99.6%) had completed their high school education compared with 75% of mothers from The Ontario Mother and Infant Survey (Roberts et al., 2001). The survey by Roberts et al. was not conducted in Ottawa, but in central Ontario. Therefore, the findings are limited to highly educated populations.

The findings from the current study are limited by a few other factors. Women included in the survey were from an urban setting and only those who had a telephone could participate. In addition, the study was limited to hospitals with separate units for labour, birth and recovery, and for nursery and postpartum. Therefore it is not generalizable to maternity units with single room maternity care. Nonetheless, the construct under study, mother-baby togetherness, included five elements which reflects the childbirth continuum and not the institutional division of intrapartum care and postnatal care.

Recommendations

The Ottawa Model of Research Use developed by Logan and Graham (1998) was used as a framework to systematically examine the barriers to apply the FCMNC recommendations into practice. The model suggests that the barriers can be related to factors inherent in the practice environment and issues related to the potential adopters, in this case the healthcare providers. Recommendations regarding these two elements are

now discussed, followed by recommendations regarding future research.

Practice environment

The practice environment includes structural factors, social factors and the clientele (Logan & Graham, 1998). Structural factors refer to policies, physical layout, and economic and work issues (Logan & Graham, 1998).

Structural factors: policies

The current study revealed that the practice environment barriers to mother-baby togetherness might be overcome by changing hospital policies. The regional committee for 24-hour combined mother baby care or a sub-committee should review hospital policies and practices to facilitate mother-baby togetherness. A policy to provide newborn care at the mother's bedside could increase mother-baby togetherness in maternity units in Ottawa. Newborn care in the mother's room rather than in the nursery is part of FCMNC (Health Canada, 2000a). With bedside care, the rates of physical proximity during the first few hours, transfer together to postnatal unit and rooming-in would most likely increase and the rate of combined mother-baby care would remain high or increase as well. Consequently, a larger proportion of women in the four maternity units in Ottawa would experience the full scope of mother-baby togetherness. With this policy, care would be provided as a smooth continuum reminiscent of the childbearing continuum, rather than being fragmented by the institutional divisions of maternity and newborn care.

The policy of newborn care at the mother's bedside should be instituted in the four maternity units and applied to all dyads, including those after a caesarean birth. Caesarean dyads should benefit from care based on FCMNC principles, just as much as any other mother or baby (Phillips, 1996). Regardless of the type of birth, it is the infant's condition that guides the decision for medical monitoring or treatment away from the mother. For

babies of similar health status, the only difference after a caesarean birth is that mothers need more help with infant care (Ecenroad & Zwelling, 2000). Nurses are in a good position to provide this additional support. Under the FCMNC philosophy, separation when the mother is not physically able to participate in her baby's care does not seem justifiable. Further investigation is needed to assess women's needs and nurses' workload post caesarean birth.

Another policy change could be to keep the nursery exclusively for babies who require medical attention and interventions. The regional committee for 24-hour combined mother baby care has been reviewing the exclusion criteria for 24 hour mother baby combined care (see Appendix J). Each maternity unit should review its practices to ensure that nursery care is provided exclusively to infants concerned by the exclusion criteria list. The initial routine care such as the admission, bath, temperature stabilization and assessment should be performed in the mother's room to avoid any unnecessary separation. Monitoring the baby's well-being during the first few hours of life should not necessitate separation from the mother (SOGC, 1998). Routine neonatal procedures should not be performed in the nursery. Consequently, most dyads would experience more mother-baby togetherness, with the added benefit of facilitating mothers' acquaintance with their babies and knowledge about their care. Furthermore, fathers would have more opportunities to learn about their infants' care and behaviour, in preparation for their life at home. Today, one of the maternity units has changed its policy and practices regarding the nursery. The regular nursery has been closed and as recommended by Health Canada (2000a), newborn care is provided at the mother's bedside. Only babies who require medically indicated observation or treatment are admitted to the neonatal unit.

Each maternity unit could institute another policy for transferring mothers and

babies together from the labour and birth unit to the postnatal unit. Separation can be very stressful for the parents of infants who require medical supervision or treatment (Phillips, 1996). Whenever possible, fathers should accompany their infants to the nursery or neonatal unit.

Maternity unit perinatal or quality assurance committees need to review their policies on a regular basis to ensure that these are consistent with the FCMNC national guidelines and best practice. As found in the current study, there is a gap between policies and practices. Therefore, the quality assurance process needs to include a regular mechanism to assess whether policies are followed in practice. Chart audits, clientele surveys, elective record database are possible mechanisms.

Structural factors: physical layout

Newborn care at the mother's bedside could be a feasible alternative to the single room maternity care model, with the same objective of preserving mother-baby togetherness. With the single room maternity care model, the family remains in the same room from its arrival at the hospital during labour until mother and baby are discharged home postnatally, with the advantage of no separation and more continuity of care (Janssen et al., 2000). Although Health Canada (2000a) recognizes single room maternity care as the standard of care, it is not possible to implement such model of care everywhere because it requires major structural changes.

However, the physical layout of a maternity unit could be altered to facilitate newborn care and assessment where the mother is, right from the moment of birth and throughout the postnatal stay in hospital. Bedside newborn care should simply require mobile equipment and ergonomic work surfaces in each room, so that healthcare providers can comfortably work in the presence of mothers. These adaptations are manageable on the

labour and birth unit, the recovery room and the postnatal ward.

Structural factors: economic and work issues

Economic and work issues can influence the implementation of newborn care at the mother's bedside. For instance, budget constraints might postpone the major innovation of single room maternity care in Ottawa. However, newborn care at the mother's bedside and transfer together to the postnatal unit does not require any additional human nor physical resources, but could facilitate nurses' work and improve mothers' satisfaction and learning during their short stay in hospital. Keeping mothers and babies together reduces time spent going back and forth to the mother's room and to the nursery. The nurse goes only to one place to provide care to two clients. For instance, when the nurse needs to check the mother, she can simultaneously observe the baby's condition. In addition, caring for mother and baby at once increases the number of nurse-client interactions. The care she provides to the baby becomes a teaching opportunity and the mother can use the nurse as a role model. The mother also has more occasions to ask questions. Previous studies have shown that nurses and mothers rate parent education higher when one nurse provides care to both the mother and the baby in the same room (Janssen et al., 2000; Watters & Kristiansen, 1995).

Nurses who care for caesarean dyads should have a lighter work assignment because of additional postoperative tasks. The usual postnatal ratio nurse:dyads is 1:4 (Janssen et al., 2000; Watters & Kristiansen, 1995). A ratio of 1:3 should be the normal workload for nurses who care for caesarean dyads, so they are also able to provide more help to mothers following a caesarean birth.

Social factors: the leaders

Within a maternity unit, nurses in key positions can facilitate or hinder an

innovation, in this case, the implementation of newborn care at the mother's bedside and transfer together to the postnatal unit (Logan & Graham, 1998). Team leaders, nurse educators, clinical managers and administrators need to show their commitment to these measures, otherwise their ambivalence to try new procedures will limit the full implementation of mother-baby togetherness (King & Toe, 2000). Nurses in key positions should adhere to the regional orientation of keeping mothers and babies together. They should work with all levels of staff to identify barriers to the implementation of newborn care at the mother's bedside and transfer together to the postnatal unit, and bring practical solutions relevant to their clinical setting (Gennaro et al., 2001). Diplomacy and mediation skills can greatly facilitate the implementation of the new measures by addressing the local factors that might hinder mother-baby togetherness (Graham, Harrison, Brouwers, Davies & Dunn, 2002).

The clientele

The clientele's reactions can encourage or discourage healthcare providers to adhere to an innovation (Logan & Graham, 1998). According to some nurses, many mothers like to have their babies in the nursery at night, so they can sleep (Bassett, 2001; Ecenroad & Zwelling, 2000). There could be a public education program about the expectation and benefits of mother-baby togetherness, so that mothers and their families are less likely to request that their babies remain in the nursery. On the other side, informed clients are also more likely to claim their rights to keep their babies with them, if care practices are not in line with the public message. To ensure that the public education message is integrated within the childbearing community, hospital practices need to truly reflect mother-baby togetherness. For instance, facilitating the presence and participation of the father or a support person to help with infant care may encourage more women to keep their babies

with them, day and night.

Public health nurses could give information on the benefits of mother-baby togetherness. The regional committee for 24-hour combined mother baby care has recommended that the education curriculum for prenatal classes include a section on the benefits of non-separation of mothers and babies (Ghattas, 2001).

Three of the maternity units have demonstrated some leadership and commitment for the non-separation of mothers and babies, with the production of a pamphlet and a poster entitled "Coming Together, Staying Together" (see Appendix K). The purpose of this initiative is to prepare families to keep their babies with them during the entire hospital postnatal stay. The pamphlet and poster offer explanations based on research evidence about the benefits for mothers and babies to stay together in hospital. Pamphlets and posters could be distributed to maternity units, public health units, physicians and midwives clinics to inform the public and pregnant women about mother-baby togetherness. Public education about keeping mothers and babies together will most likely facilitate nurses' work. Once mothers and their families know about the new measure and are aware of the rationale behind new care practices, they are less likely to claim nursery care. The pamphlet "Coming Together, Staying Together" could be distributed through the pre-admission kit given to each women who plans to give birth in a maternity unit.

Since the clientele may be a barrier to implementing a new measure, a study could be conducted to assess the extent to which women want or do not want newborn care at the mother's bedside day and night. The childbearing community knowledge and adherence to the "Coming Together, Staying Together" message could also be studied to guide program planning.

Healthcare providers

Healthcare providers' attitudes, knowledge and skills are potential barriers or supports to innovations (Logan & Graham, 1998). The current study did not provide specific information regarding healthcare providers. Therefore an analysis of their attitudes, knowledge and skills could be conducted to find out what are the perceived barriers to implementation. Targeted education about the FCMNC philosophy and the evidence on the benefits of mother-baby togetherness would likely be beneficial to increase providers' awareness. Changing healthcare providers' behaviour is a challenge, even when research evidence provides a sound basis for care (Clark & Sleep, 1997; Davies, 2002).

Healthcare providers' attitudes need to reflect a family-centred philosophy. In support to a shift from a staff-centred approach to family-centred care, educational sessions are required (Ecenroad & Zwelling, 2000). As a starting point, the findings from the current study should be disseminated so that administrators, clinical managers, staff nurses, midwives and physicians can get a picture of the degree of implementation of the FCMNC recommendations, regionally and locally. To disseminate the study, a copy of this thesis will be available through the Public Health and Long Term Care branch of the City of Ottawa, the regional committee for 24-hour combined mother baby care, the University of Ottawa library and the thesis committee members. Publication in a journal is also anticipated.

Advanced practice nurses could disseminate the study findings and the evidence on mother-baby togetherness through presentation and discussion sessions with healthcare providers involved with maternity and newborn care in hospital. These sessions could be held a few times and at different locations to reach the largest possible number of professionals. Fact sheets could be developed for quick references in the clinical settings.

Written documentation should be located on the labour and birth unit and on the postnatal ward of each maternity unit, in order for staff to access it easily without taking any additional time to search for the information. The document from Health Canada (2000a) on FCMNC should also be available. With increased access to research information in the work environment and with appropriate ongoing education opportunities, some of the barriers to the implementation of evidence into practice should be reduced (Plumb, 2002).

To support family-centred attitudes and knowledge, ongoing education could also take the form of educational outreach visits. The nurse educator from each maternity unit or an advanced practice nurse should meet with healthcare providers in their own settings, to keep all staff informed about their unit performance regarding mother-baby togetherness (Davies, 2002). For instance, one year after the implementation of bedside care and transfer together to the postnatal unit, each of the five elements of mother-baby togetherness should be investigated. Evaluation of the effect of the new measures is an important aspect in improving quality of care (King & Toe, 2000). The results could then be compared with the current study findings and educational activities and subsequent practices adjusted accordingly.

If healthcare providers' attitudes, knowledge and skills are barriers to the implementation of mother-baby togetherness, they need to be updated. To reinforce staff's ability to change, training is generally an effective strategy (Davies, 2002). For instance, some nurses may need training to perform the initial newborn assessment in the mother's room and not in the nursery. Nurses should integrate physical care with parental education (Phillips, 1998). Some staff need to be shown how to integrate parental education with tasks which used to be done in the nursery, away from the mother's watchful eye.

Follow-up educational sessions could be beneficial to bring about solutions to

unforeseen obstacles in implementing bedside care and transfer together to the postnatal unit. For their part, administrators and clinical managers should concretely support staff by providing continuing education opportunities for all staff involved. For instance, the changes toward FCMNC in a maternity unit in the United States required a commitment from administrators in supporting nursing staff, by providing an extensive educational program about the philosophy and the implementation of new care practices (Ecenraod & Zwelling, 2000).

The regional committee for 24-hour combined mother baby care could facilitate the discussion of strategies for the implementation of mother-baby togetherness. Each participating maternity unit should be encouraged to describe their experiences, including the facilitating factors and the barriers to the implementation of mother-baby togetherness. Meeting of the regional committee could become an opportunity to talk and jointly find solutions to reduce the barriers encountered.

Future research

Based on the analysis and interpretaton of these results, several questions for further study have been identified.

1. To what extent do women want mother-baby togetherness? With a FCMNC philosophy, input and feedback from women should be obtained and incorporated in maternity care (Health Canada, 2000a; Maternity Center Association, 2002). The results could give some indications about women's perspectives for family-centred care in each maternity unit and on a regional basis.

2. What are the needs and preferences of women who give birth by caesarean section compared to women who give birth vaginally, regarding rooming-in? Once women's needs and preferences are identified then nurses' workload and tasks can be

tailored to provide client-centred care.

3. What do healthcare providers perceive as barriers to implementing rooming-in? It is important to identify and understand the factors that may influence adoption of a measure, in order to intervene on its barriers (Logan & Graham, 1998).

4. What are nurses' attitudes, knowledge and skills about the provision of the best practice recommendations on FCMNC? The results could help in preparing continuing education programs based on the healthcare providers concerned.

5. What is the effectiveness of different intervention strategies to promote mother-baby togetherness? Potential strategies such as increased prenatal education, public education campaigns, as well as continuing education and training for staff need to be evaluated for effectiveness. The results would assist administrators from the maternity units and public health units to choose the best strategies to promote mother-baby togetherness.

6. What are the effects of the elements of mother-baby togetherness on selected health outcomes? A number of health outcomes are listed in a new framework which has evolved from the current study analytic framework (see Figure 5). The new framework is based on the literature on mother-baby togetherness and on reflections following the current study.

7. What is the validity of women's self-report to measure mother-baby togetherness? Data regarding each element of mother-baby togetherness could be collected using women's self-report and compared with another method of data collection. For example, observation using work sampling methodology (randomly selected times) could be used to assess the timing of first physical contact and physical proximity during the first few hours. Alternatively, chart audits could be compared with data reported by mothers.

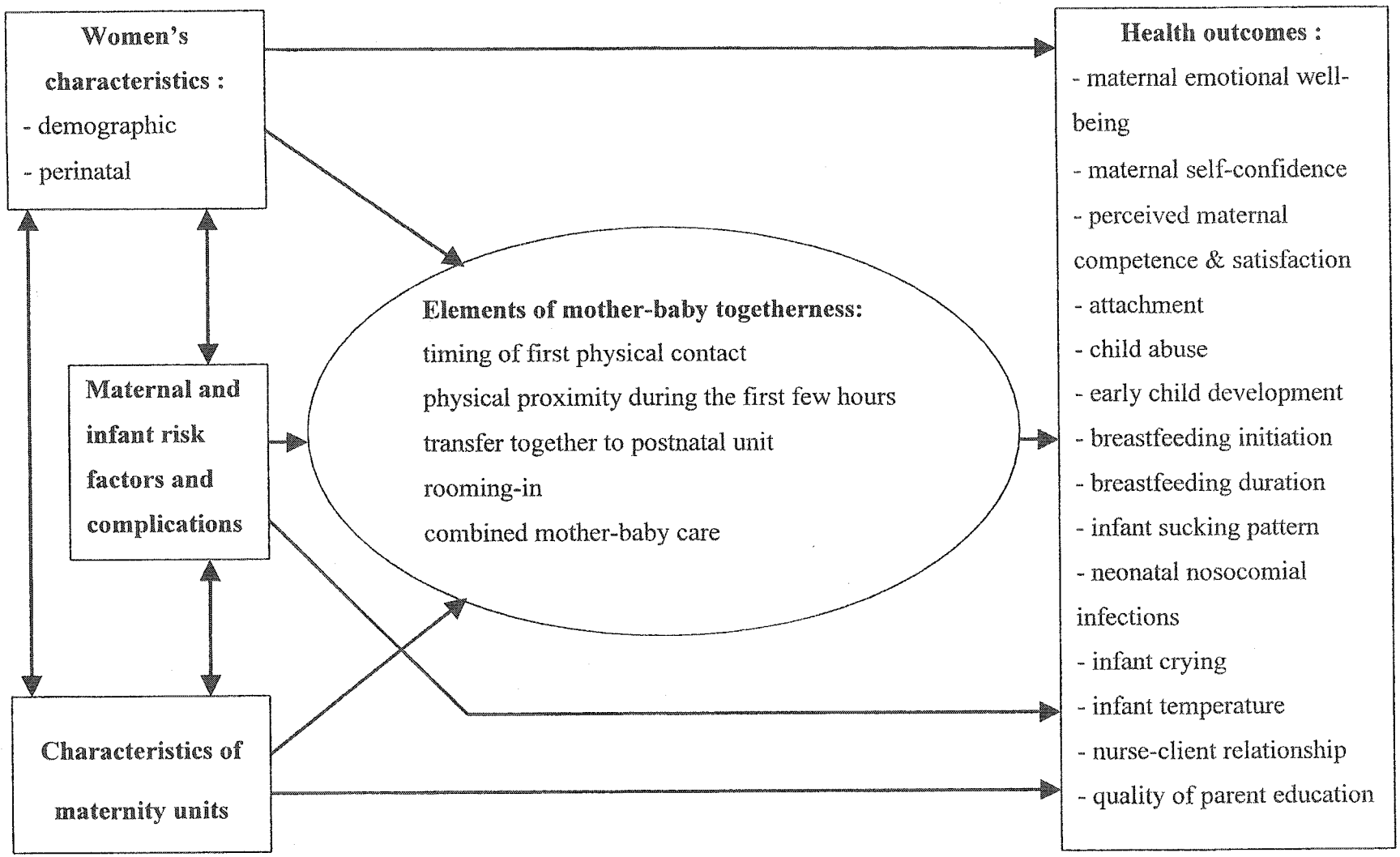


Figure 5: New framework of mother-baby togetherness for future research

In the literature, some elements of mother-baby togetherness have an impact on certain health outcomes. For instance, early contact and rooming-in have been found to improve breastfeeding initiation and duration (WHO, 1998). However, all elements have not been studied in relation to each health outcome. Evidence shows that some variables are related to some elements of mother-baby togetherness, which in turn are related to some health outcomes. For example, the current study revealed that compared to women who give birth vaginally, a significantly smaller proportion of women who give birth by caesarean room-in 24 hours a day. With more rooming-in, women show more affectionate behaviour and interact more with their babies (Norr et al., 1989; Prodromidis et al., 1995). DiMatteo et al. (1999) showed that women who give birth by caesarean show less positive reactions to their babies after birth and interact less with them once returned home than those who give birth vaginally. Is it the caesarean birth or less rooming-in or a combination that influenced fewer signs of attachment from the mother? Could rooming-in counteract reduced attachment? The new framework holds numerous potential relationships that could be studied.

Summary of the recommendations

- The Ottawa regional committee for 24-hour combined mother baby care and maternity unit perinatal or quality assurance committees should review hospital policies and practices to facilitate mother-baby togetherness. Specifically, a policy to provide newborn care at the bedside for all mothers including those who had a caesarean birth is recommended.
- The newborn nursery should be used exclusively for infants who require medical attention and special interventions.
- Quality assurance methods to assess on an ongoing basis whether policies are

followed in practice are recommended (for example: chart audit, clientele survey, database review)

- A ratio of 1:3 should be the normal workload for nurses who care for caesarean dyads.
- Healthcare providers should be knowledgeable and skilled regarding mother-baby togetherness. They may require continuing education.
- Prenatal and public education programs are recommended so that families are aware of the importance and benefits of mother-baby togetherness. The dissemination of the pamphlet "Coming Together, Staying Together" in admission kits sent to future hospital clients is recommended.
- Teams of researchers should conduct further studies on the best methods to obtain reliable and valid data on women's needs and preferences, on nurses' attitudes, knowledge and skills, on the promotion of mother-baby togetherness, and on health outcomes.
- Future research is recommended to evaluate the effectiveness of different intervention strategies to promote mother-baby togetherness.

References

Ashmore, A. (2001). Implementing skin-to-skin contact in the immediate postnatal period. *MIDIRS Midwifery Digest, 11*, 247-250.

Bajo, K., Hager, J., & Smith, J. (1998). Clinical focus: Keeping moms and babies together. *AWHONN Lifelines, 2*(2), 44-48.

Ball, J. A. (1994). *Reactions to motherhood: The role of postnatal care*. Hale, England: Books for Midwives Press.

Bassett, V. (2001). The evidence for keeping moms & babies together in hospital. *Perinatal Newsletter: A Publication of the Perinatal Partnership Program of Eastern & Southeastern Ontario, 18*(3), 3-4.

Bondas-Salonen, T. (1998). New mothers' experiences of postpartum care – A phenomenological follow-up study. *Journal of Clinical Nursing, 7*, 165-174.

Bourgoin, G. L., Lahaie, N. R., Rheaume, B. A., Berger, M. G., Dovigi, C. V., Picard, L. M., & Sahai, V. F. (1997). Factors influencing the duration of breastfeeding in the Sudbury region. *Canadian Journal of Public Health, 88*, 238-241.

Burns, N., & Grove, S. K. (1999). *Understanding nursing research* (2nd ed.). Philadelphia: W.B. Saunders Company.

Capitulo, K. L., & Silverberg, M. C. (2001). Creating patient-focused, family-centred, maternal-child and pediatric healthcare. *MCN, The American Journal of Maternal Child Nursing, 26*, 298-306.

Carr, C. A., & Schott, A. (2002). Differences in evidence-based care in midwifery practice and education. *Journal of Nursing Scholarship, 34*, 153-158.

Christensson, K., Cabrera, T., Christensson, E., Uvnäs-Moberg, K., & Winberg, J. (1995). Separation distress call in the human neonate in the absence of maternal body contact. *Acta Paediatrica, 84*, 468-473.

City of Ottawa. (2002). *Visiting Ottawa* [Website]. Retrieved November 24, 2002, from http://ottawa.ca/visitingOttawa/about_en.shtml

City of Ottawa. (2003). [Live birth data from the City of Ottawa 2001]. Unpublished raw data.

Clark, E. H., & Sleep, J. (1997). Determining effective care: The contribution of midwifery research. In B. R. Sweet (Ed.), *Mayes' midwifery: A textbook for midwives* (pp. 1069-1086). London: Ballière Tindall.

Clarke, S. P., & Cossette, S. (2000). Secondary analysis: Theoretical, methodological, and practical considerations. *Canadian Journal of Nursing Research, 32*, 109-129.

Cone, J. D., & Foster, S. L. (1993). *Dissertations and theses from start to finish: Psychology and related fields*. Washington, DC: American Psychological Association.

Davies, B. L. (2002). Sources and models for moving research evidence into clinical practice. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 31*, 558-562.

Declercq, E. R., Sakala, C., Corry, M. P., Applebaum, S., Risher, P. (2002, October). *Listening to mothers: Report of the first national U.S. survey of women's childbearing experiences*. New York: Maternity Center Association. Retrieved November 22, 2002, from http://www.maternitywise.org/listeningtomothers/

DiGirolamo, A. M., Grummer-Strawn, L. M., & Fein, S. (2001). Maternity care practices: Implications for breastfeeding. *Birth, 28*, 94-100.

DiMatteo, M. R., Morton, S. C., Damush, T. M., Carney, M. F., Pearson, M., & Kahn, K. L. (1999). Cesarean childbirth and psychosocial outcomes: A meta-analysis. *Health Psychology, 15*, 303-314. Retrieved August 2, 2001, from Database of Abstracts of Reviews of Effectiveness. In The Cochrane Library, Issue 1, 2001. Oxford: Update Software.

Ecenroad, D., & Zwelling, E. (2000). A journey to family-centred maternity care. *MCN, The American Journal of Maternal Child Nursing, 25*, 178-185.

Enkin, M., Kierse, M. J. N. C., Neilson, J., Crowther, C., Duley, L., Hodnett, E., & Hofmeyr, J. (2000). *A guide to effective care in pregnancy and childbirth* (3rd ed.). Oxford: Oxford University Press.

Fairbank, L., O'Meara, S., Renfrew, M. J., Woolridge, M., Sowden A. J., & Lister-Sharp D. (2000). A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. *Health Technology Assessment, 4*(25). Swedish Council on Technology Assessment in Health Care. Retrieved August 2, 2001, from Health Technology Assessment Database. In The Cochrane Library. Oxford: Update Software.

Garcia, J., Redshaw, M., Fitzsimons, B., & Keene, J. (1998). *First class delivery: A national survey of women's views of maternity care*. London: Audit Commission, National Perinatal Epidemiology Unit.

Gennaro, S., Hodnett, E., & Kearney, M. (2001). Making evidence-based practice a reality in your institution. *MCN, American Journal of Maternal Child Nursing, 26*, 236-244.

Ghattas, M. (2001). Regional committee for 24-hour combined mother baby care offers forum for promoting common approaches and problem solving. *Perinatal Newsletter: A Publication of the Perinatal Partnership Program of Eastern & Southeastern Ontario, 18*(3), 3.

Graham, I. D., Harrison, M. B., Brouwers, M., Davies, B. L., & Dunn, S. (2002). Facilitating the use of evidence in practice: Evaluating and adapting clinical practice guidelines for local use by health care organizations. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 31*, 599-611.

Greenberg, M., Rosenberg, I., & Lind, J. (1973). First mothers rooming-in with their newborns: Its impact upon the mother. *American Journal of Orthopsychiatry, 43*, 783-788.

Hansen Cottrell, B., & Grubbs, L. M. (1994). Women's satisfaction with couplet care nursing compared to traditional postpartum care with rooming-in. *Research in Nursing & Health, 17*, 401-409.

Hanvey, L., Mohide, P., Shennan, A., & Sutherland, N. (1991). *Review of the maternal and newborn hospital services in Ontario: Final report of the hospital assessment team*. Toronto: Ministry of Health, Province of Ontario.

Hanvey, L., Levitt, C., & Chance, G. (1996). Are Canadian hospitals providing family-centred maternity and newborn care? *Leadership in Health Services, 5*(2), 16-20, 46.

Health Canada. (2000a). *Family-centred maternity and newborn care: National guidelines*. Ottawa: Minister of Public Works and Government Services.

Health Canada. (2000b). *Canadian perinatal health report, 2000*. Ottawa: Minister of Public Works and Government Services.

Hedberg Nyqvist, K., & Ewald, U. (1997). Successful breastfeeding in spite of early mother-baby separation for neonatal care. *Midwifery, 13*(1), 24-31.

Hill Bailey, P., Maciejewski, J., & Koren, I. (1993). Combined mother and baby care: Does it meet the needs of families? *Canadian Journal of Nursing Research, 25*(3), 29-39.

Janssen, P. A., Klein, M. C., Harris, S. J., Soolsa, J., & Seymour, L. C. (2000). Single room maternity care and client satisfaction. *Birth, 27*, 235-243.

Kiehl, E. M., Cranston Anderson, G., Wilson, M. E., & Fosson, L. (1996). Social status, mother-infant time together, and breastfeeding duration. *Journal of Human Lactation, 12*, 201-206.

King, K. M., & Teo, K. K. (2000). Integrating clinical quality improvement strategies with nursing research. *Western Journal of Nursing research, 22*, 596-608.

Krippendorff, K. (1980). *Content analysis: An introduction to its methodology.* Beverley Hills, California: Sage.

Lawson, K., & Tulloch, M. I. (1995). Breastfeeding duration: Prenatal intentions and postnatal practices. *Journal of Advanced Nursing, 22*, 841-849.

Levitt, C., Hanvey, L., Avard, D., Chance, G., & Kaczorowski, J. (1995). *Survey of routine maternity care and practices in Canadian hospitals.* Ottawa: Health Canada and Canadian Institute of Child Health.

Lobar, S. L., & Phillips, S. (1992). A clinical assessment strategy for maternal acquaintance-attachment behaviors. *Issues in Comprehensive Pediatric Nursing, 15*, 249-259.

Logan, J., & Graham, I. D. (1998). Toward a comprehensive interdisciplinary model of health care research use. *Science Communication, 20,* 227-246.

Martell, L. K. (2001). Heading toward the new normal: A contemporary postpartum experience. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 30*, 496-506.

Maternity Center Association. (2002, October). *Listening to mothers: Report of the first national U.S. survey of women's childbearing experiences executive summary and recommendations issued by the Maternity Center Association.* New York: Maternity Center Association. Retrieved November 22, 2002, from http://www.maternitywise.org/listeningtomothers/

McCain, M. N., & Mustard, J. F. (1999). *Reversing the real brain drain: Early years study, final report.* Toronto: Publications Ontario.

McKay, S., & Phillips, C. R. (1984). *Family-centred maternity care, implementation strategies.* Rockville: An Aspen Publication.

Medves, J. M. & O'Brien, B. (2001). Does bathing newborns remove potentially harmful pathogens from the skin? *Birth, 28*, 161-165.

Midwives Alliance of North America (MANA). (2002). MANA statement of values and ethics. Retrieved November 30, 2002, from http://www.mana.org/valuesethics.html

Norr, K. F., Roberts, J. E., & Freese, U. (1989). Early postpartum rooming-in and maternal attachment behaviors in a group of medically indigent primiparas. *Journal of Nurse-Midwifery, 34*, 85-91.

Phillips, C. R. (1996). *Family-centred maternity care : A basic text* (4th ed.). St.Louis: Mosby.

Phillips, C. R. (1998). Why mother-baby care? [Excerpt from symposia]. *AWHONN Lifelines, 2* (1), 53-54.

Plumb, R. (2002). Midwives' attitude to research-based practice: Part 1. *MIDIRS Midwifery Digest, 12*, 171-173.

Polit, D. F., & Hungler, B. P. (1999). *Nursing research: Principles and methods* (6th ed.). Philadelphia: Lippincott.

Prodromidis, M., Field, T., Arendt, R., Singer, L., Yando, R., & Bendell, D. (1995). Mothers touching newborns: A comparison of rooming-in versus minimal contact. *Birth, 22*, 196-200.

Ransjö-Arvidson, A.-B., Matthieses, A.-S., Lilja, G., Nissen, E., Widström, A.-M., & Uvnäs-Moberg, K. (2001). Maternal analgesia during labor disturbs newborn behavior: Effects on breastfeeding, temperature, and crying. *Birth, 28*, 5-12.

Renfrew, M. J., Lang, S., & Woolridge M. W. (1999). Early versus delayed initiation of breastfeeding [Review]. Retrieved August 2, 2001, from The Cochrane Database of Systematic Reviews. In The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Righard, L., & Alade. M. O. (1990). Effect of delivery room routines on success of first breast-feed. *The Lancet, 336*, 1105-1107.

Roberts, J., Sword, W., Watt, S., Gafni, A., Krueger, P., Sheehan, D., & Soon-Lee K. (2001). Costs of postpartum care: Examining associations from the Ontario mother and infant survey. *Canadian Journal of Nursing Research, 33*, 19-34.

Rowe-Murray, H. J., & Fisher, J. R. W. (2001). Operative intervention in delivery is associated with compromised early mother-infant interaction. *British Journal of Obstetrics and Gynaecology, 108*, 1068-1075.

Rowe-Murray, H. J., & Fisher, J. R. W. (2002). Baby friendly hospital practices: Cesarean section is a persistent barrier to early initiation of breastfeeding. *Birth, 29*, 124-131.

Salariya, E. (1990). Parental-infant attachment. In J. Alexander, V. Levy, & S. Roch, (Ed.), *Midwifery practice : Postnatal care a research-based approach* (pp.62-83).

Sepkoski, C. M., Lester, B. M., Ostheimer, G. W., & Brazelton, T. B. (1992). The effects of maternal epidural anesthesia on neonatal behavior during the first month. *Developmental Medicine and Child Neurology, 34*, 1072-1080.

Shepard, M. P., Carroll, R. M., Mahoh, M. M., Moriarty, H. J., Feetham, S. L., Deatrick, J. A., & Orsi, A. J. (1999). Conceptual and pragmatic considerations in conducting a secondary analysis: An example from research on families. *Western Journal of Nursing Research, 21*, 154-167.

Society of Obstetricians and Gynaecologists of Canada. (1998, December). *Healthy beginnings: Guidelines for care during pregnancy and childbirth.* (Policy statement No. 78). Ottawa: Author.

Society of Obstetricians and Gynaecologists of Canada. (2000, May). *Attendance at labour and delivery: Guidelines for obstetrical care.* (Policy statement No. 89). Ottawa: Author.

Waldenström, U., & Swenson, A. (1991). Rooming-in at night in the postpartum ward. *Midwifery, 7*, 82-89.

Watters, N. E., & Kristiansen, C. M. (1995). Two evaluations of combined mother-infant versus separate postnatal nursing care. *Research in Nursing & Health, 18*, 17-26.

Weiss, M. E., & Armstrong, M. (1991). Postpartum mothers' preferences for nighttime care of the neonate. *Journal of Obstetric, Gynaecologic, and Neonatal Nursing, 20*, 290-295.

World Health Organization. (1998). *Evidence for the ten steps to successful breastfeeding.* Geneva: Author, Division of Child Health and Development.

Wray, J., & Benbow, A. (2001). Midwifery practice in the postnatal period: Recommendations for practice. *MIDIRS Midwifery Digest, 11*, 227-230.

Zadoroznyj, M. (1996). Women's satisfaction with antenatal and postnatal care: An analysis of individual and organisational factors. *Australian and New Zealand Journal of Public Health, 20*, 594-602.

Zwelling, E., Phillips, C. R. (2001). Family-centered maternity care in the new millennium: Is it real or is it imagined? *Journal of Perinatal & Neonatal Nursing, 15*, 3, 1-12.

Appendices

Appendix A: Text Words Used During the Search of the Literature

Main text words	Synonymous or connected text words
Postpartum	Postnatal, postnatal care, postbirth
Hospital	_
Mother	Mother-baby, mother-baby unit, mother-infant, maternity, maternal-child care
Baby	Newborn, neonate
Family	Family-centred, family-centered
Togetherness	Together, non-separation, separation
Attachment	Bonding
Contact	Physical, proximity, closeness,
Rooming-in	Rooming in
Combined care	_

Appendix B: Family-Centred Maternity Care Study

Survey Questionnaires

Note: The 21 questions within a frame were used for the variables and the exclusion criteria, for the current secondary analysis.

ID# _____

Family-Centred Maternity and Newborn Care
Mother's questionnaire, One Week Postpartum

1. Is your baby a boy or a girl? _____ Boy _____ Girl

2. What was your baby's birthweight _____

3. Was this your first baby?
_____ Yes
_____ No → 3.1 How many other children do you have? _____

Now I would like to ask you some questions about your baby's birth

4. Was your baby born:
_____ Vaginally? → GO TO QUESTION # 5

_____ By cesarean?

4.1 Did you have an: _____ Epidural (needle in the back) anaesthetic
_____ General anaesthetic

4.2 Did you have a previous cesarean birth?
_____Yes → Did your doctor/midwife discuss the possibility of having a vaginal birth this time? _____ Yes _____ No
_____No

5. While you were in labour and giving birth, did one nurse stay with you all of the time?
_____ Yes
_____ No

5.1 In total, how many nurses were with you?_____

6. Did you have anyone (other than your health care professional and hospital staff) with you during your labour and your baby's birth?
_____Yes
_____ No → GO TO QUESTION # 13

7. Was your partner with you during labour and birth?
_____ Yes _____ No → GO TO QUESTION # 8

7.1 How welcome did your partner feel?
Rate this on a scale from 1 to 5 with 1 being not at all welcome and 5 being very welcome.

1	2	3	4	5
Not at all Welcome		Somewhat Welcome		Very Welcome

8. Were your other children with you during labour and birth?
_____ Yes _____ No → GO TO QUESTION # 9

8.1 How welcome did your other children feel?
Rate this on a scale from 1 to 5 with 1 being not at all welcome and 5 being very welcome.

1	2	3	4	5
Not at all Welcome		Somewhat Welcome		Very Welcome

9. Was another family member with you during labour and birth?
_____ Yes _____ No → GO TO QUESTION # 10

9.1 How welcome did your family member feel?
Rate this on a scale from 1 to 5 with 1 being not at all welcome and 5 being very welcome.

1	2	3	4	5
Not at all Welcome		Somewhat Welcome		Very Welcome

10. Was a friend with you during labour and birth?
_____ Yes _____ No → GO TO QUESTION # 11

10.1 How welcome did your friend feel?
Rate this on a scale from 1 to 5 with 1 being not at all welcome and 5 being very welcome.

1	2	3	4	5
Not at all Welcome		Somewhat Welcome		Very Welcome

11. Was a doula with you during labour and birth?
_____ Yes _____ No → GO TO QUESTION # 12

11.1 How welcome did your doula feel?
Rate this on a scale from 1 to 5 with 1 being not at all welcome and 5 being very welcome.

1	2	3	4	5
Not at all Welcome		Somewhat Welcome		Very Welcome

12. Was another person with you during labour and birth
_____Yes (please specify)_____ _____ No → GO TO QUESTION #13

12.1 How welcome did this person feel?
Rate this on a scale from 1 to 5 with 1 being not at all welcome and 5 being very welcome.

1	2	3	4	5
Not at all Welcome		Somewhat Welcome		Very Welcome

13. Did you want anyone else to be with you during labour and birth?
_____ Yes _____ No

If yes, please explain why they were excluded
_____
_____
_____
_____

14. During labour and birth how would you describe the support that you received from the hospital nursing staff? Rate this on a scale from 1 to 5 with 1 being not at all supported to 5 being very well supported.

1	2	3	4	5
Not at all Supported		Somewhat supported		Very well supported

15. During labour and birth, how would you describe the support that you received from your doctor/midwife? Rate this on a scale from 1 to 5 with 1 being not at all supported to 5 being very well supported.

1	2	3	4	5
Not at all Supported		Somewhat supported		Very well supported

16. During labour and birth, how would you describe the support that you received from the others present (e.g, your partner, friend, etc.)? Rate this on a scale from 1 to 5 with 1 being not at all supported to 5 being very well supported.

1	2	3	4	5
Not at all Supported		Somewhat supported		Very well supported

_____ Not applicable

17. Overall, how would you describe the support that you received? Rate this on a scale from 1 to 5 with 1 being not at all supported to 5 being very well supported.

1	2	3	4	5
Not at all Supported		Somewhat supported		Very well supported

Now I would like to ask you about some of the things that may have happened during your labour and birth?

18. Did you have your pubic hair shaved?
_____ Yes _____ No

19. Did you have an enema?
_____Yes _____ No

20. Was your baby's heart rate monitored by an electronic fetal monitor attached to you?
_____ Continuously (all the time) _____ At intervals _____ Not at all

21. Did you have an IV (intravenous)?
_____ Yes If yes, why_____
_____No

22. Were you encouraged to drink fluids during labour?
_____ Yes _____ No

23. Were you encouraged to eat during labour?
_____ Yes _____ No

24. Were you encouraged to walk around during labour?
_____ Yes _____ No

25. Were you able to choose the position that you wanted to give birth in?
_____ Yes _____ No

26. What position did you give birth in?
_____ Lying on my back with stirrups
_____ Lying on my back, no stirrups
_____ Sitting or semi-sitting
_____ Lying on my side
_____ Squatting/standing
_____ Other (specify) _____

27. Did you have an episiotomy (a cut to make the opening of the vagina bigger)?
_____ Yes _____ No

28. Did you use any of the following for pain relief/management? (Check all that apply.)
_____ Touch/massage
_____ Breathing techniques
_____ Relaxation techniques
_____ Visualization
_____ Shower
_____ Bath
_____ Injection of narcotics (e.g., Demerol)
_____ Nitrous oxide (gas)
_____ Other -- please specify_____
_____

29. Did you have an epidural (a needle in the back) for pain?
_____ Yes →
_____ No

29.1 If yes, what was done to help you cope with the pain before you had the epidural?
_____
_____

30. Were any of the following used during your labour and birth?

Antibiotics	_____ Yes	_____ No
Forceps	_____ Yes	_____ No
Vacuum extraction	_____ Yes	_____ No
Pitocin/syntocin (drip)	_____ Yes	_____ No

Other(specify)_____-

31. Did you labour and give birth in the same room?
_____ Yes
_____ No

32. How long after the birth did you stay in the room you gave birth in?
_____ Less than an hour
_____ One hour
_____ Two/three hours
_____ Till discharge

33. When did you first hold/touch your baby:
_____ Immediately after birth (baby placed directly into your arms/on your abdomen)?
_____ Within the first ten minutes?
_____ Within the first half hour?
_____ Longer than a half hour?

34. Did your baby stay with you for the first few hours after birth?
_____ Yes
_____ No →

→ Please explain _____
_____
_____

35. Were you moved to another room after birth?
_____ Yes
_____ No, I stayed in the same room

35.1. If yes, was your baby moved with you? _____ Yes _____ No, we were separated

36. Were you separated from your baby at all while you were in hospital?
_____ Yes
_____ No

36.1 If yes, when did this occur the first time and why?
_____
_____

37. How long did you stay in hospital after the birth of your baby?
_____ hours OR
_____ days

38. How did you feel about the length of stay in hospital after the birth of your baby? Was it:
_____ too short
_____ OK
_____ Too long

38.1 Please state the reason for your answer.
_____
_____

39. During your postpartum stay in hospital, did you have rooming-in (your baby remained in your room)
_____ During the day only
_____ 24 hours (i.e., overnight)
_____ Not at all
_____ Other -- please describe _____
_____

40. During your postpartum stay in hospital, on any one shift who took care of you and your baby?
_____ One nurse for both me and my baby
_____One nurse for me and one (different) nurse for my baby

41. How much time per day did your baby spend in the nursery?
_____ hours

42. Do you feel that you had the opportunity to spend enough time with your baby while in hospital?
_____ Yes _____ No

43. Do you feel that you had the opportunity to ask questions of your baby's doctor?
Rate this on a scale from 1 to 5 with 1 being never and 5 being always.

1	2	3	4	5
Never		Sometimes		Always

44. Do you feel that you had the opportunity to ask questions of the nurses?
Rate this on a scale from 1 to 5 with 1 being never and 5 being always.

1	2	3	4	5
Never		Sometimes		Always

45. Who could visit the baby in your room:
_____ The baby's father?
_____ Your other children?
_____ The baby's grandparents?
_____ Others? -- please specify_____

46. How would your describe the number/frequency of visitors you had while in hospital?
Rate this on a scale from 1 to 5 with 1 being far too many and 5 being just right.

1	2	3	4	5
Far too many				Just right

47. How would you describe the number/frequency of visitors that your roommate(s) had while in hospital?
Rate this on a scale from 1 to 5 with 1 being far too many and 5 being just right.

1	2	3	4	5
Far too many				Just right

____ I had no roommates

48. How would you rate the amount of time you had while in hospital to learn to care for your baby?
Rate this on a scale from 1 to 5 with 1 being very inadequate and 5 being plenty of time.

1	2	3	4	5
Very Inadequate		Somewhat adequate		Completely adequate

49. How would you rate the amount of time you had while in hospital to learn to care for yourself?
Rate this on a scale from 1 to 5 with 1 being very inadequate and 5 being plenty of time.

1	2	3	4	5
Very Inadequate		Somewhat adequate		Completely adequate

50. How would you rate the amount of time your partner had while in hospital to learn to care for your baby?
Rate this on a scale from 1 to 5 with 1 being very inadequate and 5 being plenty of time.

1	2	3	4	5
Very Inadequate		Somewhat adequate		Completely adequate

51. Was there a lounge for parents to use in the hospital?
_____ Yes _____ No

52. Was there a kitchen for parents to use in the hospital?
_____ Yes _____ No

53. Was your partner able to stay overnight with or near you and your baby if you desired?
_____ Yes _____ No

54. When you left the hospital, were you aware of when your first visit was with your baby's doctor?
_____ Yes If yes, when was it: _____ days after discharge
_____ No
_____ I was under the care of a midwife

55. How confident did you feel about caring for yourself and your baby when you were discharged from hospital?
Rate this on a scale from 1 to 5 with 1 being not at all confident and 5 being very confident.

1	2	3	4	5
Not at all confident		Somewhat confident		Very confident

56. When you left the hospital, were you given information about the following community resources:
_____ Public health nursing visits/telephone calls?
_____ Healthy Babies/Healthy Children program?
_____ Well Baby Drop-Ins offered by the Health Department?
_____ Parent Child Information Line at the Health Department
_____ Breastfeeding Support Drop-Ins?
_____ Baby Passport?
_____ Other resources? –(please specify) _____
_____

57. Did your baby spend any time in a special care nursery/neonatal intensive care unit?
_____ Yes 57.1 What was the reason?_____
_____ No → GO TO QUESTION # 63

58. Were you able to visit/be with your baby whenever you wanted?
_____ Yes
_____ No → 58.1 What were the reasons?_____
_____

59. Was the baby's father able to visit/be with your baby whenever he wanted?
_____ Yes
_____ No → 59.1 What were the reasons?_____
_____ Not applicable

60. Were you able to handle your baby?
_____ Yes _____ No

61. Was the baby's father able to handle your baby?
_____ Yes _____ No _____ Not applicable

62. Was there a support group for parents whose babies need special care because they are very small or ill?
_____ Yes → If yes, did you attend? _____ Yes _____ No
_____ No

63. How would you rate the amount of information that you were given about your baby's condition from the health care professionals?
Rate this on a scale from 1 to 5 with 1 being inadequate and 5 being plenty of time.

1	2	3	4	5
Inadequate		Somewhat adequate		Completely adequate

64. Did the hospital staff support and encourage you to be involved in decisions about the following:

64.1 Having your other children present during your labour and/or birth
_____ Yes _____No

64.2 The location of your birth (labour, birth or "delivery" room)
_____ Yes _____No

64.3 Pain relief measures
_____ Yes _____No

64.4 The method used to check your baby's heart rate during labour (fetoscope or electronic fetal monitor
_____ Yes _____No

64.5 Amount of time baby roomed-in with you
_____ Yes _____No

64.6 Being separated from your baby
_____ Yes _____No

64.7 Frequency and number of postpartum visitors
_____ Yes _____No

64.8 Circumcision
_____ Yes _____No ____ N/A

64.9 When you were discharged from hospital
_____ Yes _____No

Date of Interview: _____ _____ _____
Day Month Year

THANK YOU FOR TAKING THE TIME TO PARTICIPATE IN THIS SURVEY AND ANSWER ALL OF THESE QUESTIONS!

ID#_____

Family-Centred Maternity and Newborn Care
Mother's questionnaire, Six Weeks Postpartum

I would like to ask you some questions about the care, support and education that you received when you were pregnant.

1. Did you attend prenatal classes with this pregnancy?

_____Yes **1.1 Who offered the classes?**_____ Ottawa Carleton Health Department
_____Birthcare
_____Canadian Mothercraft
_____Childbirth Education Association
_____First Step Childbirth Education
_____Hopital Montfort Hospital
_____Lifepaths Certified Childbirth Educator
_____Multiple Expectations (Ottawa Twin Parents' Association)
_____Ottawa Hospital Civic Campus
_____Service Perinatal Service
_____ Other (specify) _____

1.2 Did someone go to prenatal classes with you?
_____Yes **1.2.1 If yes, who?** _____Partner
_____Friend
_____Family member
_____Other, Please specify_____

_____ No → **GO TO QUESTION #2**

1.2.2 Did your companion feel included in the prenatal classes?
_____ Yes _____ No

_____ No → **GO TO QUESTION #2**

2. Who was your health care provider during your pregnancy? (check all that apply)
_____Family doctor
_____Midwife
_____Obstetrician

3. When did you first go for prenatal care?
_____months of pregnancy

4. Did someone else attend your prenatal care visits with you?

_____ Yes **4.1 If yes, who:** _____ Partner
_____ Other children
_____ Family member
_____ Friend
_____ Other – please specify _____

_____ No → **GO TO QUESTION #5**

4.2 Were they made to feel included in the visit?
_____ Yes _____ No

5. Did your doctor/midwife discuss with you his/her approach to care, birth options, etc. during your pregnancy?
_____ Yes _____ No

6. Did you have a written birth plan that you developed with your doctor/midwife?
_____ Yes _____ No

7. Do you feel that you had the opportunity to ask questions of your doctor/midwife? Rate this on a scale from 1 to 5 with 1 being never and 5 being always.

1	2	3	4	5
Never		Sometimes		Always

8. Do you feel that you understood what to expect from labour and birth? Rate this on a scale from 1 to 5 with 1 being not at all and 5 being well enough.

1	2	3	4	5
Not at all		Somewhat		Well enough

9. Did the following people discuss preterm labour with you:
Your doctor/midwife? _____ Yes _____ No
Your prenatal educator? _____ Yes _____ No

10. Do you feel you understood the signs/symptoms of preterm labour? Rate this on a scale from 1 to 5 with 1 being not at all and 5 being well enough.

1	2	3	4	5
Not at all		Somewhat		Well enough

11. Did you arrange for any of the following supports while you were pregnant?
_____ Support during labour and birth (person(s) other than your doctor/midwife)
_____ Support for breastfeeding postpartum
_____ Support for taking care of your baby in the early weeks

12. During your pregnancy, were you aware of, or did you become aware of any of the following community resources: (check all that apply)

_____ Public health nursing visits/telephone calls
_____ Healthy Babies/Healthy Children program
_____ Well Baby Drop-Ins offered by the Health Department
_____ Parent Child Information Line at the Health Department
_____ Breastfeeding Support Drop-Ins
_____ Other resources - please specify _____
_____
_____
_____

13. Did you have any problems/illnesses during your pregnancy?

_____ Yes – **Please specify:**_____
_____ No

Now I would like to ask you some questions about feeding your baby.

14. Did the following health professionals discuss breastfeeding with you?

	Yes	No
Your baby's doctor	_____	_____
Your own doctor/midwife	_____	_____
Prenatal educator	_____	_____
Hospital nurses	_____	_____

15. Did the following health professionals discuss bottle feeding with you?

	Yes	No
Your baby's doctor	_____	_____
Your own doctor/midwife	_____	_____
Prenatal educator	_____	_____
Hospital nurses	_____	_____

16. Did you receive support and encouragement for the way you chose to feed your baby (i.e. breast or bottle) from the following health professionals?

	Yes	No
Your baby's doctor	_____	_____
Your own doctor/midwife	_____	_____
Prenatal educator	_____	_____
Hospital nurses	_____	_____

17. Did you breastfeed any of your other babies?

_____ No, this is my first baby
_____ No, I bottle-fed my other baby(ies)
_____ yes, I breastfed ____ babies (please indicate the number of babies you previously breastfed)

18. When did you make the decision to breast or bottle feed your baby?
_____ Before pregnancy
_____ During pregnancy
_____ After the baby's birth

19. How were you feeding your baby in the first 48 hours after his/her birth (check one)
_____ Breastfeeding
_____ Bottle feeding →**GO TO QUESTION # 33**
_____ Both

20. Why did you decide to breastfeed your baby? (Do not read options)
_____ Better for me
_____ Better for my baby
_____ More convenient
_____ Better for the family
_____ Less costly
_____ Other -- please specify _____

The following questions relate to your breastfeeding experience in hospital.

21. When did you first breastfeed your baby after birth:
_____ Within the first half hour?
_____ Within the first hour?
_____ After an hour?
_____ Not applicable (not breastfeeding)

22. Was your baby given formula while in hospital?
_____ Yes → What was the reason?_____
_____ No
_____ I don't know

23. Was your baby given water or sugar water while in hospital?
_____ Yes _____ No _____ I don't know

24. Was your baby weighed before or after feedings?
_____ Yes _____ No _____ I don't know

25. Was your baby given a soother while in hospital?
_____ Yes _____ No _____ I don't know

Questions 26 to32 are for Mothers who started breastfeeding in the hospital. If the Mother only bottlefed right from the beginning, Go To Question #33.

26. Were you taught/helped with any of the following while in hospital:

Positioning of the baby at your breast?	_____ Yes	_____ No
Your baby's latching onto your nipples?	_____ Yes	_____ No
Frequency of your baby's feeding?	_____ Yes	_____ No
Your baby's cues that he/she was ready to feed?	_____ Yes	_____ No
Your baby's cues that he/she was full?	_____ Yes	_____ No
Signs that your baby was feeding adequately?	_____ Yes	_____ No
Signs indicating that you should seek help?	_____ Yes	_____ No

27. Did someone (i.e., a nurse or doctor or midwife) examine your breasts postpartum?

_____ Yes _____ No

28. How many successful nursings (breastfeeds with your baby) did you have before you left hospital? _____

29. How would you describe a successful nursing (breastfeed with your baby)?

_____

_____

_____

30. How would you describe the support given by hospital staff for breastfeeding while you were in hospital?
Rate this on a scale from 1 to 5 with 1 being poor and 5 being excellent.

1	2	3	4	5
Poor		Good		Excellent

31. How would you describe the level of knowledge that the following had about breastfeeding? Rate this on a scale from 1 to 5 with 1 being poor and 5 being excellent.

31.1 The hospital (postpartum) nurses

1	2	3	4	5
Poor		OK		Excellent

31.2 The public health nurses

1	2	3	4	5
Poor		OK		Excellent

31.3 Your doctor/midwife

1	2	3	4	5
Poor		OK		Excellent

31.4 Your baby's doctor

1	2	3	4	5
Poor		OK		Excellent

32. How confident did you feel about breastfeeding when you were discharged from hospital?
Rate this on a scale from 1 to 5 with 1 being not at all confident and 5 being very confident.

1	2	3	4	5
Not at all confident		Somewhat confident		Very confident

NOW GO TO QUESTION # 36

33. Do you feel that you were supported in your decision to bottle feed by the hospital staff?
Rate this on a scale from 1 to 5 with 1 being not at all and 5 being completely.

1	2	3	4	5
Not at all		Somewhat		Completely

34. Were you shown how to prepare formula while in hospital?
_____ Yes _____ No

35. How confident did you feel about feeding your baby when you were discharged from hospital? Rate this on a scale from 1 to 5 with 1 being not at all confident and 5 being very confident.

1	2	3	4	5
Not at all confident		Somewhat confident		Very confident

The following questions relate to your feeding experience since you left hospital.

36. How are you presently feeding your baby?
_____ Breastfeeding only → **GO TO QUESTION # 40**
_____ Breastfeeding with 1 bottle of milk other than breastmilk or more a day →**GO TO QUESTION # 40**
_____ Bottle feeding only (was breastfeeding, but stopped) → **GO TO QUESTION # 37**
_____ Bottle feeding only (never breastfed) → **GO TO QUESTION # 44**

For mothers who are no longer breastfeeding

37. For how long did you breastfeed your baby?
_____ Days **OR** _____ Weeks OR _____ Months

38. Why did you stop breastfeeding? (PROBE: Please tell me all the reasons you decided to stop.) (Interviewer do not read responses).

_____ Thought baby was not getting enough milk
_____ Cracked or sore nipples
_____ Had to go back to work/school
_____ Didn't feel comfortable/didn't enjoy breastfeeding
_____ Mother was too tired
_____ Other (Please specify) _____

39. Which was the <u>most important reason</u> you stopped breastfeeding? (Only indicate one reason)

_____ Thought baby was not getting enough milk
_____ Cracked or sore nipples
_____ Had to go back to work/school
_____ Didn't feel comfortable/didn't enjoy breastfeeding
_____ Mother was too tired
_____ Other (Please specify) _____

40. Did you attend one of the Breastfeeding Support Drop-Ins?

_____ Yes

40.1 Where was the drop-in you attended?
(write the street name here) _____

40.2 Why did you attend the drop-in?
(Interviewer do not read responses)
_____ problem breastfeeding (specify) _____
_____ reassurance needed
_____ a public health nurse told me to attend
_____ other reason (specify) _____

40.3 How useful did you find this drop-in
(Interviewer read responses)
1. Very useful
2. Somewhat useful
3. Not useful

_____ No

41. Please indicate your level of agreement with the following statement: "The expectations that I had about breastfeeding were the same as what I actually experienced".

_____ Strongly agree
_____ Agree
_____ Disagree
_____ Strongly disagree

42. Would you breastfeed your next baby?
_____ Yes
_____ No
_____ Undecided

43. Did you have any problems at home with breastfeeding?
_____ Yes _____ No **GO TO QUESTION # 44**

43.1 If yes, was(were) the problem(s) (check all that apply)
_____ baby fussy/crying
_____ baby had jaundice
_____ baby dehydrated
_____ baby too sleepy
_____ worried you did not have enough milk
_____ sore nipples
_____ mastitis (breast infection)
_____ thrush
_____ other (please specify)_____

43.2 Did you seek help from anyone?
_____ Yes **If yes, who?** _____ Friend, family member
_____ Your doctor/midwife
_____ Baby's doctor
_____ Public health nurse
_____ Lactation consultant
_____ No

Now I would like to ask you some questions about the early days at home with your baby.

44. When you went home was there someone there to help you?
_____ Yes **44.1 If yes, who?**_____

_____ No

45. Has your baby had any significant health problems?
_____ Yes – **please specify** _____
_____
_____
_____ No

46. How much help have you received from family or friends since the birth of your baby?
Rate this on a scale from 1 to 5 with 1 being one and 5 being more than enough.

1	2	3	4	5
None		Some		More than enough

47. How much help have you received from health care professionals since the birth of your baby?
Rate this on a scale from 1 to 5 with 1 being one and 5 being more than enough.

1	2	3	4	5
None		Some		More than enough

48. Overall, do you feel you had enough help since the birth of your baby?
_____ Yes
_____ No

49. How confident have you felt about caring for yourself during your time at home?
Rate this on a scale from 1 to 5 with 1 being not at all confident and 5 being very confident.

1	2	3	4	5
Not at all confident		Somewhat confident		Very confident

50. How confident have you felt about caring for your baby during your time at home?
Rate this on a scale from 1 to 5 with 1 being not at all confident and 5 being very confident.

1	2	3	4	5
Not at all confident		Somewhat confident		Very confident

51. Have you received the following services:
_____ Phone call from a public health nurse
_____ Visit from a public health nurse
_____ Services from the Health Babies Healthy Children program
If yes, _____ family visitor
_____ Public health nurse
_____ Visit to a Well Baby Drop-In
_____ Phone call to the Parent Child Information Line
_____ Visit to a Breastfeeding Support Drop-In
_____ Package of information in the mail from the Health Department
_____ Other – please specify_____

52. If extra assistance had been available, what would you have liked to have had? Please rank the following from 1 to 6 in the order from most important to least important with number 1 being the most important.

_____ Help with baby care
_____ Help with keeping the house clean/laundry
_____ Help with meal preparation
_____ Help with other children
_____ Help with grocery shopping
_____ Other (Please specify) _____

53. Has your baby ever had to be taken to the emergency department?

_____ Yes **53.1 If yes, What was his/her age at the time of the first visit to the emergency department?** _____

What was the reason for the visit? _____

_____No

54. Has your baby ever had to be admitted to hospital?

_____ Yes

54.1 If yes, How many times has your baby been admitted to hospital?_____ times
What was(were) the reason(s) for the visit(s)?

1st visit _____
2nd visit _____
3rd visit _____
4th visit _____

_____No

Now I would like to ask you a few final questions about yourself and your baby. As you have recently had a baby, we would like to know how you are feeling now. Please say the answer which comes closest to how you have felt in the past 7 days, not just how you feel today.

INTERVIEWER TO SAY "IN THE PAST 7 DAYS" BEFORE EACH QUESTION

55. I have been able to laugh and see the funny side of things:
(interviewer to read responses)

As much as I always could 0_____
Not quite so much not 1_____
Definitely not so much now 2_____
Not at all 3_____

56. I have looked forward with enjoyment to things:
(interviewer to read responses)

As much as I always did	0_____
Rather less than I used to	1_____
Definitely less than I used to	2_____
Hardly at all	3_____

57. I have blamed myself unnecessarily when things went wrong:
(interviewer to read responses)

Yes, most of the time	3_____
Yes, some of the time	2_____
Not very often	1_____
No, never	0_____

58. I have felt worried and anxious for no very good reason:
(interviewer to read responses)

Yes, very often	3_____
Yes, sometimes	2_____
Hardly ever	1_____
No, not at all	0_____

59. I have felt scared or panicky for no very good reason:
(interviewer to read responses)

Yes, quite a lot	3_____
Yes, sometimes	2_____
No, not much	1_____
No, not at all	0_____

60. Things have been getting on top of me:
(interviewer to read responses)

Yes, most of the time I haven't been able to cope at all	3_____ (ask if they would like a PHN to call)
Yes, sometimes I haven't been coping as well as usual	2_____
No, most of the time I have coped quite well	1_____
No, I have been coping as well as ever	0_____

61. I have been so unhappy that I have had difficulty sleeping:
(interviewer to read responses)

Yes, most of the time	3_____ (ask if they would like a PHN to call)
Yes, sometimes	2_____
Not very often	1_____
No, not at all	0_____

62. I have felt sad or miserable:
(interviewer to read responses)

Yes, most of the time	3_____ (ask if they would like a PHN to call)
Yes, quite often	2_____
Not very often	1_____
No, not at all	0_____

63. I have been so unhappy that I have been crying:
(interviewer to read responses)

Yes, most of the time	3_____ (ask if they would like a PHN to call)
Yes, quite often	2_____
Only occasionally	1_____
No, never	0_____

64. The thought of harming myself has occurred to me:
(interviewer to read responses)

Yes, quite often	3_____ (ask if a PHN can call)
Sometimes	2_____ (ask if a PHN can call)
Hardly ever	1_____ (ask if a PHN can call)
Never	0_____

TOTAL SCORE:_____

A score of 12+ indicates mother may have postpartum depression. **Ask: It sounds as thought you have been feeling down over the past few weeks. You may want to call your doctor or discuss these feelings).** If they do not have a doctor, advise to call Parent Child Info Line 724-4179 and **ask if they would allow you to refer them to a PHN. Thanks for answering these questions on your feelings.**
I know some of the questions may seem a little strange, but some women do experience problems feeling down after the birth of their baby.

Now a few final questions about yourself

65. What is your date of birth?
_____ Month _____ Year

66. What is the last year completed at school, college or university?
_____ No formal schooling
_____ Public school – grade ____
_____ High school – grade ____
_____ Some college
_____ Some university
_____ Completed college
_____ Completed university (one degree)
_____ Postgraduate degree

67. Do you have a partner?

_____ Yes
_____ No → **GO TO QUESTION # 69**

68. What was the last year your partner completed at school, college or university?

_____ No formal schooling
_____ Public school – grade ____
_____ High school – grade ____
_____ Some college
_____ Some university
_____ Completed college
_____ Completed university (one degree)
_____ Postgraduate degree

69. Where were you born?

_____ Canada → **GO TO QUESTION # 71**

_____ Caribbean	_____ Lebanon	_____ Italy
_____ Germany	_____ Mainland China	_____ United States of America
_____ Greece	_____ Poland	_____ Other, Please specify _____
_____ Holland	_____ Poland	
_____ Hong Kong	_____ Somalia	
_____ India	_____ United Kingdom (England, Scotland, Wales Northern Ireland) or Ireland	

70. What year did you first come to live in Canada?

_____ (year immigrated to Canada)

71. What is the language you first learned and still understand?

_____ English
_____ French
_____ Other – Please specify _____

72. How many people in total (both children and adults) are supported by your family's income?

_____ People

73. What was your approximate family income <u>from all sources</u>, before taxes during the previous year – January 1, 1999 to December 31, 1999?

_____ Less than $17,000	_____ $36,000 to $39,999	_____ $60,000 to $69,999
_____ $17,000 to $26,999	_____ $40,000 to $44,999	_____ $70,000 to $79,999
_____ $27,000 to $31,999	_____ $45,000 to $49,999	_____ $80,000 or more
_____ $32,000 to $35,999	_____ $50,000 to $59,999	

_____ Refused to answer *(read each response but not this one)*

74. What is your present marital status? Are you:

_____ Married
_____ Common-law
_____ Single
_____ Separated
_____ Divorced
_____ Widowed
_____ Other – Please specify _____

75. Please share any comments that you might have indicating how the care you have received during your pregnancy, birth and postpartum period could be more responsive to your needs and your families needs.

Date of Interview: _____ _____ _____
Day Month Year

THANK YOU FOR TAKING THE TIME TO PARTICIPATE IN THIS SURVEY AND ANSWER ALL OF THESE QUESTIONS!

GENERAL INFORMATION

Date of Interview _____
Day/month/year

Name of Hospital _____

Person Completing Interview

Name _____

Title _____

Department _____

STATISTICS

1. Total number of maternity beds? _____ beds

2. Total number of level 1 bassinets? _____ bassinets

Total number of livebirths in 2000?_____livebirths

Of these total livebirths, how many were vaginal? _____
*Of these total livebirths, how many were cesarean?*_____

4. Total number of stillbirths in 2000? _____stillbirths

5. Total number of livebirths 2500 grams and over in 2000?_____livebirths

6. Total number of livebirths less than 2500 grams in 2000? _____ livebirhs

7. Total number of cesarean births in 2000? _____ cesarean births

a) Of these total cesarean births, how many were repeat cesarean births? _____
b) How many women who had a repeat cesarean birth had a trial of labour first? _____
c) How many women had a vaginal birth after a previous cesarean birth? _____

Is this hospital a ...(please check only one response)

University teaching hospital _____
University affiliated hospital _____
Community Hospital _____

COMMITTEES AND FAMILY PARTICIPATION

9. Does your hospital have an ethics committee?

Yes _____
No _____

10. Do families participate on any of your committees?

Yes _____ → *If yes, please provide details on the lines below*
No _____

_____
_____
_____
_____

11. Do families:
Have the opportunity to provide input into program needs assessments?
Yes _____ No _____

Have the opportunity to provide input into education materials?
Yes _____ No _____

Have the opportunity to review drafts of written materials?
Yes _____ No _____

Participate in the orientation of new staff?
Yes _____ No _____

Provide feedback on the care they received through evaluation surveys?
Yes _____ No _____

Have the opportunity to offer suggestions for programs?
Yes _____ No _____

Participate in staff in-service?
Yes _____ No _____

Have the opportunity to provide input on specific issues, e.g., through focus groups?
Yes _____ No _____

Have the opportunity to meet with staff?
Yes _____ No _____

Participate in program development and evaluation in other ways?
Yes _____ → *if yes, please provide details on the lines below.*

_____
_____
_____

No _____

FAMILY EDUCATION

12. Does your hospital offer its own childbirth education classes?
Yes _____ No _____

13. Are parents given written information about labour and birth care specific to your obstetrical unit?
Yes _____ No _____

14. Are parents given written information about postpartum care specific to your obstetrical unit?
Yes _____ No _____

15. Does your obstetrical unit have an instructional program for siblings to attend birth?
Yes _____ No _____

PHYSICAL FACILITIES

16. Which of the following are available at your hospital:

Traditional delivery (case) rooms?
Yes _____ → *If yes, approximately what proportion of births occurs in these rooms?*
*Percent:*_____
No _____

Combined labour-birth rooms?
Yes _____ →*If yes, approximately what proportion of births occurs in these rooms?*
*Percent:*_____
No _____

Combined labour-birth-recovery rooms?
Yes _____ →*If yes, approximately what proportion of births occurs in these rooms?*
*Percent:*_____
No _____

Combined labour-birth-recovery-postpartum rooms?
Yes _____ →*If yes, approximately what proportion of births occurs in these rooms?*
*Percent:*_____
No _____

17. Where do cesarean births take place?
    Obstetrical suite _____
    Operating room _____
    Both _____

18. Does your obstetrical unit have:

A visiting, all-purpose lounge for parents?
Yes _____ No _____

Kitchen facilities that parents can use?
Yes _____ No _____

Sleeping facilities available for partners?
Yes _____ No _____

19. In what year was your obstetrical unit built or most recently renovated?

19____
year

20. Have you proposed to upgrade your physical facility in the last five years?
Yes _____ No _____

21. Have you completed an upgrade of your physical facility in the last five years?
Yes _____ No _____

22. Are you in the process of upgrading your physical facility?
Yes _____ No _____

LABOUR AND BIRTH

23. During the course of labour in your unit, which of the following are encouraged:

Expectant partners in labour room? (please check only one response)

Encouraged _____
Not encouraged _____
Encouraged, with restrictions _____ (please specify)

_____
_____
_____

b) Siblings in labour room? (please check only one response)
Encouraged _____
Not encouraged _____
Encouraged, with restrictions _____(please specify)

_____
_____
_____

c) Grandparents in labour room? (please check only one response)
Encouraged _____
Not encouraged _____
Encouraged, with restrictions _____ (please specify)

_____
_____
_____

d) Significant other(s), as defined by the woman, in labour room? (please check only one response)
Encouraged _____
Not encouraged _____
Encouraged, with restrictions _____ (please specify)

_____
_____
_____

e) Labour support person(s) and partner in room? (please check only one response)
Encouraged _____
Not encouraged _____
Encouraged, with restrictions _____ (please specify)

_____
_____
_____

f) Do you restrict the number of support persons in the room? (please check only one response)
Yes _____ → If yes, to how many? _____ support persons
No _____

24. What is the unit policy about shaving pubic hair on admission? *(please check only one response)*
Complete shave _____
Partial/mini shave _____
No shave _____
Differs between physicians _____
Other (Please specify) _____

a) In practice, what percentage of women giving birth in your unit have their pubic hair shaved?

_____ percent

25. Which of the following best describes your hospital's unit policy about giving an enema/suppository on admission?

Enema/suppository to all admissions_____
Enema/suppository for specified women only _____
If so, please specify _____
No enema/suppository _____
Differs between physicians _____

a) In practice, what percentage of women giving birth in your unit have an enema?

_____ percent

26. What is the unit policy about routinely starting I.V.'s on women in labour?

Routine I.V. for all women _____
I.V. for some women _____
Differs between physicians _____
Other (please specify)_____

a) In practice, what percentage of women giving birth in your unit have I.V. therapy?

_____ percent

27. What is the hospital's unit policy regarding initial electronic fetal heart rate (FHR) monitoring?

Routine initial 20 to 30 min. FHR strip for all women _____
Initial 20 to 30 min. FHR strip for specific women only _____
Do not use initial 20 to 30 min. FHR strip _____

a) In practice, what percentage of women giving birth in your unit have initial electronic FHR monitoring? _____ percent

28. What is the hospital's unit policy regarding continuous electronic fetal heart rate (FHR) monitoring?

Routine continuous electronic FHR monitoring for all women _____
Continuous electronic FHR monitoring for specific women _____
Do not use continuous electronic FHR monitoring _____

a) In practice, what percentage of women giving birth in your unit have continuous electronic FHR monitoring? _____ percent

29. Are women encouraged to walk around during normal labour? (*Please check one response only)*
Yes _____
Yes, some conditions apply _____ (please specify)_____
_____
No _____

a) In practice, what percentage of women walk around during normal labour?
_____Percent

30. Are women encouraged to walk around during prior to medical augmentation in a slowly progressing labour?
Yes ____
Yes, some conditions apply _____ (please specify) _____
_____
No _____

a) In practice, what percentage of women do this? _____ Percent

31. For pain control in your unit do you use:
Ambulation/position change
Yes _____ →*If yes, approximately what proportion of women use it?* _____ *Percent*
No _____

Bath/shower
Yes _____ →*If yes, approximately what proportion of women use it?* _____ *Percent*
No _____

Nitrous oxide
Yes _____ →*If yes, approximately what proportion of women use it?*_____ *Percent*
No _____

Narcotics
Yes _____ →*If yes, approximately what proportion of women use it?* _____ *Percent*
No _____

TENS (Transcutaneous Electrical Nerve Stimulation)
Yes _____ →*If yes, approximately what proportion of women use it?*_____ *Percent*
No _____

Epidural
Yes _____ →*If yes, approximately what proportion of women use it?* _____ *Percent*
No _____

g) If you offer an epidural, is it available ...
24 hours _____
Less than 24 hours _____

h) Other
Yes _____, Please Specify _____
If yes, approximately what proportion of women use it? _____ *Percent*
No _____

32. Do you encourage women to use position change and other comfort measures before epidural anaesthesia?
Yes, all women _____
Yes, some women _____
No _____

33. During the actual birth at your hospital, which of the following are encouraged:

Expectant partner in room for vaginal birth?
Encouraged _____
Not Encouraged _____
Encouraged, but with restrictions _____ (please specify)
_____
_____

Siblings in room for vaginal birth?
Encouraged _____
Not Encouraged _____
Encouraged, but with restrictions _____(please specify)
_____
_____

Grandparents in room for vaginal birth?
Encouraged _____
Not Encouraged _____
Encouraged, but with restrictions_____(please specify)
_____
_____

Significant other(s), as defined by the woman, in room for vaginal birth?
Encouraged _____
Not Encouraged _____
Encouraged, but with restrictions _____(please specify)
_____
_____

Labour support person(s) and partner in room for vaginal birth?
Encouraged _____
Not Encouraged _____
Encouraged, but with restrictions _____(please specify)

_____

_____

Expectant partner or significant other present for cesarean birth with epidural anaesthesia?
Encouraged _____
Not Encouraged _____
Encouraged, but with restrictions _____(please specify)

_____

_____

Expectant partner or significant other present for cesarean birth with general anaesthesia?
Encouraged _____
Not Encouraged _____
Encouraged, but with restrictions_____ (please specify)

_____

_____

THE FOLLOWING QUESTIONS RELATE TO VAGINAL BIRTH:

34. Is the position a woman may adopt for birth ...
Recommended in unit policy _____
Her own choice _____
Other (please specify) _____

35. Can you approximate what proportion of women give birth in lithotomy position with stirrups? _____ Percent:

36. Can you approximate what proportion of women give birth in the following positions?
Supine: _____ Percent
Semi-recumbent: _____ Percent
Squatting: _____ Percent
Sitting: _____ Percent
Other: _____ Percent (please specify)_____

37. Is there a unit policy that specifies the length of time a woman should be allowed to be in the second stage of labour before action is taken?
Yes _____ → *If yes, how long for...*
Primiparae _____ hours
Multiparae _____ hours
Are there any exceptions? _____
No _____

38. Can you approximate the proportion of women who have an episiotomy in your unit:
Primip, Percent: _____%
Multip, Percent: _____ %

39. Do you have birthing beds?
Yes _____ →*If yes, what proportion of vaginal births take part in them?* _____%
No _____

40. Do you have the option of VBAC when medically appropriate?
Yes, for all women _____
Yes, only when a woman requests it _____
No _____

IMMEDIATELY FOLLOWING BIRTH

41. In your unit, where is a healthy baby usually put immediately after s/he is born?
(CHECK ALL THAT APPLY)
In mother's arms _____
On mother's abdomen _____
Into a separate cot/basinet _____
Resuscitation table _____
On the birthing bed _____
Other (please specify) _____
_____

42. When is the partner usually given the first opportunity to hold the baby?
Immediately after birth _____
Within one hour _____
Later _____

43. What is the unit policy about cutting the cord?
No policy _____
Immediate _____
Delayed _____ (please specify) _____

44. Is the partner given the opportunity to cut the cord?
Frequently _____
Rarely _____
Never _____

45. Is there a policy that facilitates the family being together immediately following birth?
Yes _____ →*If yes, for how long?* Unlimited _____
>2 hours _____
2 hours _____
1 hour _____
No _____

46. Do you have a routine observation period for the healthy newborn?
Yes _____
No _____ → If NO Go To Question #47

If yes:
a) Where do these observations take place in the majority of cases? (CHECK ALL THAT APPLY)
Separate from the mother, in an observation room/nursery _____
With the mother, in an observation room/nursery _____
With the mother, in her room _____

b) During the observation, where is the baby?(CHECK ALL THAT APPLY)
Incubator _____
Bassinet _____
Mother's bed _____

How long is this observation period?
<1 hour _____
1-2 hours _____
3-4 hours _____
>4 hours _____ (please specify) _____

Is the baby usually separated from the mother at any time during the observation period?
Yes _____
No _____

47. Is there a routine practice to separate the mother and her healthy baby during transfer from the birthing unit to the postpartum unit?
Yes _____
No _____
Not applicable _____

48. In practice, mothers and healthy babies are separated during transfer from the birthing unit to the postpartum unit...
Almost all of the time _____
More than half the time _____
Less than half the time _____
Hardly ever _____

49. Are parents present during the physical examination of the infant?
Yes _____ No _____

POSTPARTUM

50. What is the average length of stay in your hospital:

a) For vaginal birth? Number of days: _____

b) For cesarean birth? Number of days: _____

51. Following birth, can the mother choose early discharge?
Yes _____
No _____

52. Are there formal protocols setting conditions for early discharge?
Yes _____ → *If yes, what is the definition of an early discharge?*
6 hours or less _____
12 hours or less _____
24 hours or less _____
48 hours or less _____
Other, specify _____
No _____

53. After discharge, do you refer families to the following supports available in the community:

a) Home visit
Yes _____ → If yes, who visits?_____
How many visits? _____
When? _____
No _____

b) Postpartum Clinic
Yes _____
No _____

c) Telephone advice line
Yes _____
No _____

d) Homemaking
Yes _____
No _____

e) Mothers' groups
Yes _____
No _____

f) *Breast-feeding clinic*
Yes _____
No _____

g) *Other*
Yes _____→(please specify) _____
No _____

54. What percentage of your postpartum beds can be used for rooming-in?_____ percent

55. According to your rooming-in policy how many hours per day are infants with their mothers?
19 - 24 hours _____
13 - 18 hours _____
5 - 12 hours _____
1 - 4 hours _____

56. In actual practice, what is the usual time that babies room-in per day?
Number of hours: _____

57. Are there restrictions on visiting hours for ...

a) Partners
Yes _____ →(please specify) _____
No _____

b) Siblings
Yes _____ →(please specify) _____
No _____

c) Grandparents
Yes _____→ (please specify) _____
No _____

d) Significant others
Yes _____ → (please specify) _____
No _____

e) Others
Yes _____ → (please specify) _____
No _____

58. Do healthy newborns remain in the room when the following visitors are present:

a) Partner?
Yes _____
No _____

b) Siblings?
Yes _____
No _____

c) Grandparents?
Yes _____
No _____

d) Significant Others?
Yes _____
No _____

e) Others
Yes _____ →(please specify)_____
No _____

59. Do you practise combined mother-infant care, (one nurse cares for the mother/baby couple), in your unit?
Yes _____ No _____

60. Do you provide parent education for breastfeeding?
Yes _____ → *If yes, is it to ...*
Individuals _____
Groups _____
Both _____
No _____

61. Do you provide parent education in family planning and contraception?
Yes _____ → *If yes, is it to ...*
Individuals _____
Groups _____
Both _____
No _____

62. Do you have a policy/protocol for assessing women who may be going home to potentially violent situations?
Yes _____ No _____

63. Do you have a policy/protocol for assessing babies who may be going home to violent situations?

Yes _____ No _____

INFANT FEEDING

64. Can you approximate the percentage of mothers who are breastfeeding at the time of discharge? _____ Percent

65. For mothers who breastfeed, when is the baby first offered the breast?

Immediately after birth, (within 30 min) ____

Later (please specify) _____

_____

66. Are breastfed babies allowed to breastfeed on cue, whenever they indicate an interest, 24 hours a day?

Yes _____

No _____ →If no, how is it scheduled?

_____

_____

67. Are breastfed babies usually given other drinks (water, glucose, formula) at any time?

Yes _____→ *If yes, when?* CHECK ALL THAT APPLY:

Before the first feed _____

During the observation period _____

At night _____

During the day _____

Other _____ (please specify) _____

No _____

68. For breastfed babies, is there a policy to restrict the time spent feeding?

Yes _____

No _____→ *If no, is the time spent feeding determined by the baby/mother?*

Yes _____

No _____ Explain: _____

69. Are breastfed babies weighed before and after feedings?

Never _____

On occasion _____

Routinely _____

70. Do you encourage women to continue breastfeeding with jaundiced infants?
Yes _____
No _____

71. Do you have a certified lactation consultant (s) on staff?
Yes _____ → How many? CHECK ALL THAT APPLY
Full-time _____
Part-time _____
Day shift only _____
Total LC's _____
No _____

72. Does your hospital have a written policy on breastfeeding?
Yes _____ → *If yes, is this policy based on the WHO/UNICEF"10 Steps" and the International Code?* Yes _____ No _____
No _____

73. Are mothers offered written breastfeeding information at the time of discharge?
Always _____
Usually _____
Rarely _____
Never _____

74. Are mothers offered information on breastfeeding support groups and/or advice at the time of discharge?
Always _____
Usually _____
Rarely _____
Never _____

75. For mothers who formula feed:
a) Is formula feeding on demand?
Yes _____
No _____ → If no, how is it organized?_____

b) Is there a choice of formula?
Yes _____
No _____

76. When does your unit give breastfeeding mothers sample packs containing formula?
Never _____
On request only _____
Routinely to all breastfeeding mothers _____

77. When does your unit give formula feeding mothers sample packs of formula?
Never _____
On request only _____
Routinely to all formula feeding mothers _____

78. Does your hospital have an exclusive contract with a formula company?
Yes _____
No _____

79. Does your hospital provide soothers?
Yes _____
No _____

SUPPORT FOR FAMILIES WITH PREMATURE BABIES

80. Does your hospital have a special care nursery/neonatal intensive care unit?
Yes _____ → *If yes, how many bassinets does the unit have?* Number:_____bassinets
No _____→ Go to question 88

81. Who may visit a newborn in the special care nursery/neonatal unit:

Partner? Yes _____ No _____

Siblings? Yes _____ No _____

Grandparents? Yes _____ No _____

Others? Yes _____ → *If "others" are able to visit, are they restricted as to the number or who they are?*
Yes _____ (please specify) _____
No _____
No _____

82. Is the number of visitors restricted at any one time?
Yes _____ → *If yes, what is the number?* _____ *visitors*
→ *If yes, is the family unit able to visit as a whole?*
Yes _____
No _____
No _____

83. Who is able to touch or handle a newborn in the special care nursery/neonatal unit:

Newborn's Mother? Yes _____ No _____

Partner? Yes _____ No _____

Siblings? Yes _____ No _____

Grandparents? Yes _____ No _____

Others? Yes _____ (please specify) _____
No _____

84. Do you have a support group for parents with babies in the neonatal intensive care unit/special care nursery?
Yes _____ No _____

85. Do you have a visiting protocol for the neonatal intensive care unit/special care nursery?
Yes _____ No _____

86. Do you encourage babies in the neonatal intensive care unit/special care nursery to have ....
Toys? Yes _____ No _____

Music/other recordings? Yes _____ No _____

Other? Yes _____ (please specify)_____
No _____

87. Do you have lighting facilities, which permit dimming at night in the special care nursery/neonatal intensive care unit?
Yes _____ → *If yes, for ...*
The entire unit _____
Part of the unit _____
No _____

GENERAL COMMENTS

88. Do you have any additional comments?

Appendix C: Introductory Script

Family-Centred Maternity Care Study

Script for PHNs to Use When Introducing the Survey to Postpartum Women

The Ottawa Carleton Health Department would like to learn about how women are managing in the first several months following the birth of their baby. We are asking all mothers who gave birth between October 1 and October 31, 2000 if they would agree to participate in a telephone survey which consists of two phone calls, one week and six weeks after the birth of their baby.

Participation in the survey is voluntary. You may refuse to participate in the interview. If you do not wish to participate in the study your care from the Health Department will not be affected in any way. You also have the right to refuse to answer any question or to stop the interview at any time. Your answers are completely confidential and will be reported without any identifying information.

Would you be interested in helping us out with this project?

____Yes (If yes, May I pass your name and phone number along to the project team?) ____ Yes ____ No

____ No

Appendix D: Definition and Measurement of the Variables

Variables	Items from the survey questionnaires	Definition	Categories	Level of measurement
Women's Characteristics				
Age	6th week, Question (Q) 65	The difference between the date of the 1st week interview and the 15th day of the woman's month and year of birth	Mean, standard deviation, range	Ratio
Education	6th week, Q66	The last year completed at school, college or university	- Public or high school - Some college or university - Completed college - Completed university - Postgraduate degree	Ordinal
Living arrangement	6th week, Q74	Living with a male or female partner, or without a partner	- Living with a partner: married, common-law - Not living with a partner: single, separated, divorced, widowed	Nominal dichotomous
Language	6th week, Q71	Language first learned and still understood	- English - French - Other	Nominal
Parity	1st week, Q3	First baby or not	- Primiparous - Multiparous	Nominal dichotomous
Type of birth	1st week, Q4	Method of delivery	- Vaginal: spontaneous or instrumental - Caesarean section	Nominal dichotomous
Use of analgesia	1st week, Q28	Use of medication for pain management during labour and birth	- Yes (injection of narcotics, inhalation of nitrous oxide) - No	Nominal dichotomous
Use of epidural	1st week, Q29	Use of epidural anaesthesia for pain management during labour and birth	- Yes - No	Nominal dichotomous
Infant feeding method	6th week, Q19	Method of feeding the baby during the first 48 hours	- Breastfeeding - Bottle feeding - Mixed feeding (breast and bottle)	Nominal
Maternity Unit				
Maternity unit	Directly from the Public Health and Long Term Care branch of the City of Ottawa	Place of baby's birth	- A - B - C - D	Nominal

Variables	Items from the 1st week survey questionnaire	Definition	Categories	Level of measurement
Elements of Mother-Baby Togetherness				
Timing of first physical contact	Q33	The length of time after birth when the mother first holds, touches or has physical contact with her baby	- Immediately after birth - Within 10 minutes - Within ½ hour - More than ½ hour later	Nominal
Physical proximity during the first few hours	Q34	The non-separation of mother and baby from the timing of birth to the transfer to the postnatal unit, i.e. during the immediate recovery. Minimally, the baby is in the same room as the mother or within her sight.	- Baby stayed with the mother - Baby did not stay with the mother	Nominal dichotomous
Transfer together to postnatal unit	Q35	From the timing of leaving the birth unit to arrival on the postnatal unit, i.e. during the transfer/transportation to the postnatal ward.	- Mother and baby moved to postnatal unit together - Mother and baby separated for transfer	Nominal dichotomous
Rooming-in	Q39	The practice during which the baby remains with the mother.	- 24 hours - Not all of the time	Nominal dichotomous
Combined mother-baby care	Q40	A model of work organization where one nurse per shift takes care of both the mother and her baby, as an interdependent unit. Also known as dyad or couplet care	Per shift: - One nurse for both the mother and her baby - Two different nurses for the mother and her baby	Nominal dichotomous

Appendix E: Letter of Approval for Secondary Analysis from the City of Ottawa

February 14, 2002

Ms. Josee Briggs
Masters of Science Nursing (Candidate)
University of Ottawa

Dear Josee,

Re: A Survey of Women's Postpartum Experiences with Mother-Baby Togetherness in four Hospitals

Please be informed that the City of Ottawa, Public Health & Long Term Care Branch agrees to release the data you requested from the Family-Centered Maternity Care Study to assist you in the completion of the requirements for your Masters Thesis. This agreement is contingent upon you presenting proof of approval from the Health Sciences and Sciences REB. Please contact us when you have received your approval letter and we will begin the data transfer process at that time.

Sincerely

Jane Simpson, RN, MSc(A)
Program Planning and Evaluation Officer
Community Medicine & Epidemiology Unit
City of Ottawa, Public Health

Attach.

cc:

Appendix F: Certificate of Ethical Approval from the University of Ottawa

Re: A Survey of Women's Postpartum Experiences with Mother-Baby Togetherness in Four Hospitals (File H01-02-06).

February 18, 2002

Dear Ms. Briggs,

You will find enclosed the Health Sciences and Science Research Ethics Board Certification for your research project.

The responsibilities of the researcher are as follows:

- To send a copy of this approval to the Research Services, if necessary
- To notify the Research Ethics Board of any change in the research
- **To submit an Annual Status Report to the Protocol Officer that can be found at**
  htt
  res

If you have any question, you can contact me at extension

Sincerely yours,

Catherine Lesage
Protocol officer for ethics in research

c.c. Barbara Davies

Appendix G: Frequency of Patterns of the Elements of Mother-Baby Togetherness

Maternity unit	A	B	C	D	Ottawa
a-b-c-d-e	26 (15.1%)	8 (4.8%)	9 (7.9%)	2 (3.1%)	45 (8.7%)
a-b-c-d--	0	1(0.6%)	1 (0.9%)	0	2 (0.4%)
a-b-c---e	**33(19.2%)***	3 (1.8%)	15 (13.2%)	8 (12.3%)	**59 (11.4%)***
a-b---d-e	2 (1.2%)	**38 (22.6%)***	3 (2.6%)	1 (1.5%)	44 (8.5%)
a---c-d-e	1 (0.6%)	3 (1.8%)	1 (0.9%)	0	5 (1.0%)
b-c-d-e	11 (6.4%)	6 (3.6%)	0	0	17 (3.3%)
a-b-c----	4 (2.3%)	1 (0.6%)	4 (3.5%)	5 (7.7%)	14 (2.7%)
a-b---d--	2 (1.2%)	4 (2.4%)	1 (0.9%)	1 (1.5%)	8 (1.5%)
a-b-----e	11 (6.4%)	9 (5.4%)	12 (10.5%)	**9 (13.8%)***	41 (7.9%)
a---c---e	1 (0.6%)	1 (0.6%)	4 (3.5%)	2 (3.1%)	8 (1.5%)
a-----d-e	0	24 (14.3%)	4 (3.5%)	0	28 (5.4%)
b-c---e	32 (18.6%)	6 (3.6%)	4 (3.5%)	1 (1.5%)	43 (8.3%)
b---d-e	1 (0.6%)	7 (4.2%)	0	0	8 (1.5%)
c-d-e	2 (1.2%)	1 (0.6%)	0	0	3 (0.6%)
a-b------	2 (1.2%)	0	4 (3.5%)	7 (10.8%)	13 (2.5%)
a---c----	0	1 (0.6%)	0	2 (3.1%)	3 (0.6%)
a-----d--	0	0	1 (0.9%)	0	1 (0.2%)
a-------e	4 (2.3%)	13 (7.7%)	**22 (19.3%)***	**9 (13.8%)***	48 (9.2%)
b-c----	4 (2.3%)	1 (0.6%)	1 (0.9%)	2 (3.1%)	8 (1.5%)
b-----e	7 (4.1%)	5 (3.0%)	6 (5.3%)	2 (3.1%)	20 (3.9%)
c---e	4 (2.3%)	2 (1.2%)	1 (0.9%)	0	7 (1.3%)
d-e	1 (0.6%)	19 (11.3%)	0	0	20 (3.9%)
a--------	2 (1.2%)	1 (0.6%)	3 (2.6%)	6 (9.2%)	12 (2.3%)
b------	2 (1.2%)	0	1 (0.9%)	0	3 (0.6%)
d--	1 (0.6%)	0	1 (0.9%)	0	2 (0.4%)
e	12 (7.0%)	13 (7.7%)	14 (12.3%)	3 (4.6%)	42 (8.1%)
0	5 (2.9%)	1 (0.6%)	1 (0.9%)	5 (7.7%)	12 (2.3%)
Total	172 (100%)	168 (100%)	114 (100%)	65 (100%)	N = 519 (100%)

Note: a = Timing of first physical contact, b = Physical proximity during the first few hours, c = Transfer together to postnatal unit, d = Rooming-in, e = Combined mother-baby care.

* Most frequent pattern in the maternity unit

Appendix H: Statistical Results from the Elements of Mother-Baby Togetherness and Selected Variables

Table H1: *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Demographic Characteristics*

	Age ($N = 551$)	Education ($N = 552$)					Living arrangement ($N = 551$)		Language ($N = 551$)		
		Public or high school	Some college or university	College	University	Postgraduate degree	Living with a partner	Not living with a partner	English	French	Other
Timing of First Physical Contact ($N = 549$)											
Immediately after birth	$M = 29.8$ $SD = 5.2$	85 64.4%	36 59.0%	74 63.2%	107 62.6%	43 63.2%	315 62.7%	30 65.2%	195 56.9%	80 71.4%	70 64.2%
Within 10 minutes	$M = 31.2$ $SD = 5.5$	23 17.4%	13 21.3%	26 22.2%	28 16.4%	8 11.8%	91 18.1%	6 13.0%	68 20.8%	12 10.7%	18 16.5%
Within ½ hour	$M = 31.3$ $SD = 5.0$	5 3.8%	6 9.8%	5 4.3%	18 10.5%	11 16.2%	43 8.6%	2[a] 4.3%	31 9.5%	7 6.3%	7 6.4%
More than ½ hour later	$M = 32.4$ $SD = 5.8$	19 14.4%	6 9.8%	12 10.3%	18 10.5%	6 8.8%	53 10.6%	8 17.4%	33 10.1%	13 11.6%	14 12.8%
Total	$M = 30.5$ $SD = 5.4$	132 100%	61 100%	117 100%	171 100%	68 100%	502 100%	46 100%	327 100%	112 100%	109 100%
Statistical results	$F(3, 544) = 5.4$ $p = .001$*	$\chi^2(12, N = 549) = 17.3, p = .140$					$\chi^2(3, N = 548) = 3.3, p = .343$		$\chi^2(6, N = 548) = 9.0, p = .175$		

* Significant result when $p \leq .001$.

[a] 1 cell (12.5%) has expected count less than 5.

Table H1(continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Demographic Characteristics*

	Age ($N = 551$)	Education ($N = 552$)					Living arrangement ($N = 551$)		Language ($N = 551$)		
		Public or high school	Some college or university	College	University	Postgraduate degree	Living with a partner	Not living with a partner	English	French	Other
Physical Proximity During the First Few Hours ($N = 551$)											
Baby stayed with the mother	$M = 30.5$ $SD = 5.2$	75 56.4%	40 65.6%	69 59.0%	114 66.7%	47 68.1%	320 63.5%	25 54.3%	211 64.1%	65 58.0%	69 63.3%
Baby did not stay with the mother	$M = 30.5$ $SD = 5.6$	58 43.6%	21 34.4%	48 41.0%	57 33.3%	22 31.9%	184 36.5%	21 45.7%	118 35.9%	47 42.0%	40 36.7%
Total	$M = 30.5$ $SD = 5.4$	133 100%	61 100%	117 100%	171 100%	69 100%	504 100%	46 100%	329 100%	112 100%	109 100%
Statistical results	$F(1, 548) = 0.004, p = .949$	$\chi^2(4, N = 551) = 5.2, p = .269$					$\chi^2(1, N = 550) = 1.5, p = .220$		$\chi^2(2, N = 550) = 1.3, p = .510$		

* Significant result when $p \leq .001$

Table H1(continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Demographic Characteristics*

	Age ($N = 551$)	Education ($N = 552$)					Living arrangement ($N = 551$)		Language ($N = 551$)		
		Public or high school	Some college or university	College	University	Postgraduate degree	Living with a partner	Not living with a partner	English	French	Other
Transfer Together to Postnatal Unit ($N = 537$)											
Mother and baby moved to the postnatal unit together	$M = 30.4$ $SD = 5.3$	44 34.4%	27 46.6%	43 37.7%	80 47.3%	30 44.1%	208 42.3%	16 36.4%	147 45.4%	37 35.2%	40 37.4%
Mother and baby separated for transfer	$M = 30.5$ $SD = 5.4$	84 65.6%	31 53.4%	71 62.3%	89 52.7%	38 55.9%	284 57.7%	28 63.6%	177 54.6%	68 64.8%	67 62.6%
Total	$M = 30.5$ $SD = 5.3$	128 100%	58 100%	114 100%	169 100%	68 100%	492 100%	44 100%	324 100%	105 100%	107 100%
Statistical results	$F(1, 534) = 0.085, p = .771$	$\chi^2(4, N = 537) = 6.5, p = .165$					$\chi^2(1, N = 536) = 0.6, p = .446$		$\chi^2(2, N = 536) = 4.4, p = .110$		

* Significant result when $p \leq .001$.

Table H1(continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Demographic Characteristics*

	Age ($N = 551$)	Education ($N = 552$)					Living arrangement ($N = 551$)		Language ($N = 551$)		
		Public or high school	Some college or university	College	University	Postgraduate degree	Living with a partner	Not living with a partner	English	French	Other
Rooming-In ($N = 551$)											
24 hours	$M = 30.0$ $SD = 5.4$	43 32.6%	14 23.0%	45 38.5%	59 34.3%	26 37.7%	173 34.3%	14 31.1%	130 39.5%	27 24.1%	30 27.5%
Not all of the time	$M = 30.8$ $SD = 5.3$	89 67.4%	47 77.0%	72 61.5%	113 65.7%	43 62.3%	332 65.7%	31 68.9%	199 60.5%	85 75.9%	79 72.5%
Total	$M = 30.5$ $SD = 5.3$	132 100%	61 100%	117 100%	172 100%	69 100%	505 100%	45 100%	329 100%	112 100%	109 100%
Statistical results	$F(1, 548) = 3.0, p = .086$	$\chi^2(4, N = 551) = 4.9, p = .297$					$\chi^2(1, N = 550) = 0.2, p = .669$		$\chi^2(2, N = 550) = 11.4, p = .003$		

* Significant result when $p \leq .001$

Table H1(continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Demographic Characteristics*

	Age ($N = 551$)	Education ($N = 552$)					Living arrangement ($N = 551$)		Language ($N = 551$)		
		Public or high school	Some college or university	College	University	Postgraduate degree	Living with a partner	Not living with a partner	English	French	Other
Combined Mother-Baby Care ($N = 539$)											
One nurse for both the mother and her baby, per shift	$M = 30.6$ $SD = 5.3$	112 86.2%	42 72.4%	97 84.3%	149 87.6%	56 84.8%	417 84.4%	38 86.4%	289 89.8%	81 73.6%	85 80.2%
Two different nurses for the mother and her baby, per shift	$M = 30.0$ $SD = 5.8$	18 13.8%	16 27.6%	18 15.7%	21 12.4%	10 15.2%	77 15.6%	6 13.6%	33 10.2%	29 26.4%	21 19.8%
Total	$M = 30.5$ $SD = 5.4$	130 100%	58 100%	115 100%	170 100%	66 100%	494 100%	44 100%	322 100%	110 100%	106 100%
Statistical results	$F(1, 536) =$ $0..955, p = .329$	$\chi^2 (4, N = 539) = 8.1, p = .089$					$\chi^2 (1, N = 538) =$ $0.1, p = .731$		$\chi^2 (2, N = 538) = 18.3,$ $p = .000$*		

* Significant result when $p \leq .001$.

Table H2: *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Perinatal Characteristics*

	Parity ($N = 552$)		Type of birth ($N = 552$)		Use of analgesia ($N = 552$)		Use of epidural ($N = 552$)		Infant feeding method ($N = 552$)		
	Primiparous	Multiparous	Vaginal	Caesarean	Yes	No	Yes	No	Breast-feeding	Bottle feeding	Mixed feeding
Timing of First Physical Contact ($N = 549$)											
Immediately after birth	164 61.4%	181 64.2%	316 74.0%	29 23.8%	102 61.8%	243 63.3%	249 59.9%	96 72.2%	225 65.6%	36 57.1%	84 58.7%
Within 10 minutes	47 17.6%	51 18.1%	72 16.9%	26 21.3%	29 17.6%	69 18.0%	74 17.8%	24 18.0%	61 17.8%	15 23.8%	22 15.4%
Within ½ hour	29 10.9%	16 5.7%	23 5.4%	22 18.0%	16 9.7%	29 7.6%	40 9.6%	5 3.8%	30 8.7%	4 6.3%	11 7.7%
More than ½ hour later	27 10.1%	34 12.1%	16 3.7%	45 36.9%	18 10.9%	43 11.2%	53 12.7%	8 6.0%	27 7.9%	8 12.7%	26 18.2%
Total	267 100%	282 100%	427 100%	122 100%	165 100%	384 100%	416 100%	133 100%	343 100%	63 100%	143 100%
Statistical results	χ^2 (3, $N = 549$) = 5.2, $p = .161$		χ^2 (3, $N = 549$) = 151.5, $p = .000$*		χ^2 (3, $N = 549$) = 0.7, $p = .872$		χ^2 (3, $N = 549$) = 10.8, $p = .013$		χ^2 (6, $N = 549$) = 13.1, $p = .041$		

* Significant result when $p \leq .001$.

Table H2 (continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Perinatal Characteristics*

	Parity ($N = 552$)		Type of birth ($N = 552$)		Use of analgesia ($N = 552$)		Use of epidural ($N = 552$)		Infant feeding method ($N = 552$)		
	Primiparous	Multiparous	Vaginal	Caesarean	Yes	No	Yes	No	Breast-feeding	Bottle feeding	Mixed feeding
Physical Proximity During the First Few Hours ($N = 551$)											
Baby stayed with the mother	155 58.1%	190 66.9%	298 69.6%	47 38.2%	107 64.8%	238 61.7%	247 59.1%	98 73.7%	238 69.0%	38 60.3%	69 48.3%
Baby did not stay with the mother	112 41.9%	94 33.1%	130 30.4%	76 61.8%	58 35.2%	148 38.3%	171 40.9%	35 26.3%	107 31.0%	25 39.7%	74 51.7%
Total	267 100%	284 100%	428 100%	123 100%	165 100%	386 100%	418 100%	133 100%	345 100%	63 100%	143 100%
Statistical results	χ^2 (1, $N = 551$) = 4.6, $p = .032$		χ^2 (1, $N = 551$) = 40.3, $p = .000$*		χ^2 (1, $N = 551$) = 0.5, $p = .478$		χ^2 (1, $N = 551$) = 9.2, $p = .002$		χ^2 (2, $N = 551$) = 18.7, $p = .000$*		

* Significant result when $p \leq .001$.

Table H2 (continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Perinatal Characteristics*

	Parity ($N = 552$)		Type of birth ($N = 552$)		Use of analgesia ($N = 552$)		Use of epidural ($N = 552$)		Infant feeding method ($N = 552$)		
	Primiparous	Multiparous	Vaginal	Caesarean	Yes	No	Yes	No	Breast-feeding	Bottle feeding	Mixed feeding
Transfer Together to Postnatal Unit ($N = 537$)											
Mother and baby moved to the postnatal unit together	116 44.4%	108 39.1%	184 43.8%	40 34.2%	75 46.0%	149 39.8%	162 39.8%	62 47.7%	155 45.9%	26 42.6%	43 31.2%
Mother and baby separated for transfer	145 55.6%	168 60.9%	236 56.2%	77 65.8%	88 54.0%	225 60.2%	245 60.2%	68 52.3%	183 54.1%	35 57.4%	95 68.8%
Total	261 100%	276 100%	420 100%	117 100%	163 100%	374 100%	407 100%	130 100%	338 100%	61 100%	135 100%
Statistical results	χ^2 (1, $N = 537$) = 1.6, $p = .212$		χ^2 (1, $N = 537$) = 3.5, $p = .062$		χ^2 (1, $N = 537$) = 1.8, $p = .182$		χ^2 (1, $N = 537$) = 2.5, $p = .112$		χ^2 (2, $N = 537$) = 8.7, $p = .013$		

* Significant result when $p \leq .001$.

Table H2 (continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Women's Perinatal Characteristics*

	Parity ($N = 552$)		Type of birth ($N = 552$)		Use of analgesia ($N = 552$)		Use of epidural ($N = 552$)		Infant feeding method ($N = 552$)		
	Primiparous	Multiparous	Vaginal	Caesarean	Yes	No	Yes	No	Breast-feeding	Bottle feeding	Mixed feeding
Rooming-in ($N = 551$)											
24 hours	93 34.8%	94 33.1%	174 40.7%	13 10.6%	66 39.8%	121 31.4%	131 31.4%	56 41.8%	148 42.9%	13 20.6%	26 18.2%
Not all of the time	174 65.2%	190 66.9%	254 59.3%	110 89.4%	100 60.2%	264 68.6%	286 68.6%	78 58.2%	197 57.1%	50 79.4%	117 81.8%
Total	267 100%	284 100%	428 100%	123 100%	166 100%	385 100%	417 100%	134 100%	345 100%	63 100%	143 100%
Statistical results	χ^2 (1, $N = 551$) = 0.2, $p = .668$		χ^2 (1, $N = 551$) = 38.6, $p = .000$*		χ^2 (1, $N = 551$) = 3.6, $p = .058$		χ^2 (1, $N = 551$) = 4.9, $p = .027$		χ^2 (2, $N = 551$) = 33.2, $p = .000$*		
Combined Mother-Baby Care ($N = 539$) (per shift)											
One nurse for both the mother and her baby	225 86.2%	231 83.1%	362 85.6%	94 81.0%	136 82.9%	320 85.3%	351 85.8%	105 80.8%	297 87.6%	49 79.0%	110 79.7%
Two different nurses for the mother and her baby	36 13.8%	47 16.9%	61 14.4%	22 19.0%	28 17.1%	55 14.7%	58 14.2%	25 19.2%	42 12.4%	13 21.0%	28 20.3%
Total	261 100%	278 100%	423 100%	116 100%	164 100%	375 100%	409 100%	130 100%	339 100%	62 100%	138 100%
Statistical results	χ^2 (1, $N = 539$) = 1.0, $p = .317$		χ^2 (1, $N = 539$) = 1.4, $p = .230$		χ^2 (1, $N = 539$) = 0.5, $p = .476$		χ^2 (1, $N = 539$) = 1.9, $p = .165$		χ^2 (2, $N = 539$) = 6.4, $p = .041$		

* Significant result when $p \leq .001$.

Table H3: *Statistical Results from the Elements of Mother-baby Togetherness and Maternity Unit*

	Maternity unit ($N = 552$)							
	A (level II)		B (level III)		C (level I)		D (level I)	
Timing of First Physical Contact ($N = 549$)								
Immediately after birth	90	49.5%	109	63.4%	88	72.7%	58	78.4%
Within 10 minutes	46	25.3%	36	20.9%	11	9.1%	5	6.7%
Within ½ hour	25	13.7%	14	8.1%	4	3.3%	2	2.7%
More than ½ hour later	21	11.5%	13	7.6%	18	14.9%	9	12.2%
Total	182	100%	172	100%	121	100%	74	100%
Statistical results	χ^2 (9, $N = 549$) = 43.4, $p = .000$*							
Physical Proximity During the First Few Hours ($N = 551$)								
Baby stayed with the mother	146	79.8%	91	52.6%	65	53.7%	43	58.1%
Baby did not stay with the mother	37	20.2%	82	47.4%	56	46.3%	31	41.9%
Total	183	100%	173	100%	121	100%	74	100%
Statistical results	χ^2 (3, $N = 551$) = 35.2, $p = .000$*							
Transfer Together to Postnatal Unit ($N = 537$)								
Mother and baby moved to the postnatal unit together	125	69.4%	34	19.7%	43	36.4%	22	33.3%
Mother and baby separated for transfer	55	30.6%	139	80.3%	75	63.6%	44	66.7%
Total	180	100%	173	100%	118	100%	66	100%
Statistical results	χ^2 (3, $N = 537$) = 94.8, $p = .000$*							

* Significant result when $p \leq .001$.

Table H3 (continued): *Statistical Results from the Elements of Mother-Baby Togetherness and Maternity Unit*

	Maternity unit ($N = 552$)							
	A (level II)		B (level III)		C (level I)		D (level I)	
Rooming-in ($N = 551$)								
24 hours	48	26.2%	112	65.1%	23	18.9%	4	5.4%
Not all of the time	135	73.8%	60	34.9%	99	81.1%	70	94.6%
Total	183	100%	172	100%	122	100%	74	100%
Statistical results	χ^2 (3, $N = 551$) = 118.7, $p = .000$*							
Combined Mother-Baby Care ($N = 539$)								
One nurse for both the mother and her baby, per shift	152	86.4%	160	94.1%	101	84.2%	43	58.9%
Two different nurses for the mother and her baby, per shift	24	13.6%	10	5.9%	19	15.8%	30	41.1%
Total	176	100%	170	100%	120	100%	73	100%
Statistical results	χ^2 (3, $N = 539$) = 49.3, $p = .000$*							

* Significant result when $p \leq .001$.

Table H4: *Statistical Results from Combined Mother-Baby Care and Language for Each Maternity Unit*

	Maternity unit							
	A		B		C		D	
	Language							
	English	French or other	English	French or other	English	French or other	English	French or other
One nurse for both the mother and her baby, per shift	110 88.0%	42 82.4%	97 94.2%	63 94.0%	71 88.8%	30 75.0%	11 78.6%	31 53.4%
Two different nurses for the mother and her baby, per shift	15 12.0%	9 17.6%	6 5.8%	4 6.0%	9 11.3%	10 25.0%	3 21.4%	27 46.6%
Total	125 100%	51 100%	103 100%	67 100%	80 100%	40 100%	14 100%	58 100%
Statistical results	χ^2 (1, N = 176) = 1.0, p = .322		χ^2 (1, N = 170) = 0.002, p = .969[a]		χ^2 (1, N = 120) = 3.8, p = .052		χ^2 (1, N = 72) = 2.9, p = .087	

[a] 1 cell (25%) has expected count less than 5.

Appendix I: Detail of the Reasons for the First Separation Between Mother and Baby

Table I1: *Reasons for the First Separation Related to the Baby*

Category of reasons	Detailed reasons	Frequency		Percent
		n	Total	
Routine assessment and procedures			184	37.1%
	Initial general examination	90		
	Weight	36		
	Blood tests	18		
	Vital signs	12		
	Measurements	11		
	Medical examination	7		
	Injection, vitamin K	4		
	Drops in eyes	3		
	PKU	3		
Routine bath			119	24.0%
Routine surveillance			100	20.2%
	To be monitored, observed	69		
	To the nursery for a period of time	31		
Cardio-respiratory system			27	5.4%
	Mucousy, to be suctioned	9		
	To be monitored	6		
	Distressed, low APGAR	4		
	Needed oxygen	4		
	High or low heart rate	2		
	Breathing problems	1		
	To be tested for meconium aspiration	1		
Thermo-regulation			19	3.8%
	To be warmed up	11		
	Baby was cold	4		
	To be monitored	3		
	Fever	1		
No specific reason			18	3.6%
	Baby went to the nursery	15		
	Baby was in incubator	3		

Table I1 (continued): *Reasons for the First Separation Related to the Baby*

Category of reasons	Detailed reasons	Frequency		Percent
		n	Total	
Metabolism			15	3.0%
	Jaundice	6		
	To test or monitor glycaemia (gestational diabetes or baby > 9 pounds)	6		
	Low glycaemia	2		
	To see if urinating enough	1		
Other reasons			6	1.2%
	To feed baby	3		
	To fix umbilical cord	1		
	Baby was agitated	1		
	To meet other family members	1		
Prematurity (or small baby)			5	1.0%
Other medical circumstances			3	0.6%
	Cord around the neck	1		
	For circumcision	1		
	To test as mother was Strep B positive	1		
Total			496	100%

Table I2: *Reasons for the First Separation Related to the Mother*

Category of reasons	Detailed reasons	Frequency		Percent
		n	Total	
Mother's tiredness			149	65.9%
	To let mom rest	92		
	To let mom sleep	33		
	To let mom recuperate	9		
	Mom was tired or very tired	9		
	To give mom a break	5		
	Mom was not strong enough	1		
Caesarean birth			25	11.1%
	While mom was in recovery room	14		
	While mom was still in operating room	3		
	Hospital policy after a caesarean section	3		
	Anaesthetics still in effect	2		
	Mom had problems	3		
Complications			21	9.3%
	Haemorrhage or high blood loss	8		
	Mom had problems, needed care	5		
	Due to epidural	3		
	Fainting spells, unconsciousness	2		
	Low blood pressure	2		
	Manual removal of placenta	1		
Mother's choice			16	7.1%
	Mom's request	8		
	To take a shower	6		
	To go for a cigarette	2		
Hospital practices			9	4.0%
	While mom was being sutured	6		
	At night time	3		
Mother's restricted mobility			6	2.7%
	Mom was sedated, out of it	2		
	Could not get out of bed or move	2		
	Trouble with legs	1		
	Not able to hold baby	1		
Total			226	100%

Appendix J: Exclusion Criteria for 24 Hour Mother Baby Combined Care

Exclusion Criteria
For
24 hour Mother Baby Combined Care

Note:

Exclusion of a baby from immediate admission to Mother Baby care needs to be reassessed on an ongoing basis. Based on nursing assessment, the baby should be admitted to Mother Baby care as soon as his or her condition stabilizes.

Infant Exclusion Criteria:

- < 2500 grams
- 5 minute Apgar <6 with cord pH < 7.0
- <36 weeks gestation
- Temperature <36.0 until stabilizes
- Respiratory difficulties demonstrated by transient tachypnea, tachycardia, nasal flaring, grunting, tracheal tugging, central cyanosis, indrawing
- Mother or support person is unable to participate in the care of the Newborn

From the regional committee on 24-hour mother baby combined care (October 2001, revised February 2002).

Appendix K: Pamphlet and poster "Coming Together, Staying Together"

The Ottawa Hospital | L'Hôpital d'Ottawa

April 4, 2003

To Whom It May Concern:

This is to confirm that I give Josée Lafrance permission to use the "Coming Together, Staying Together" brochure in her thesis.

If you have any questions please do not hesitate to contact me.

Marlene Ghattas
Corporate Clinical Director
Obstetrics/Gynaecology, Newborn Care & Women's Health

Obstetrics & Gynecology, # 404 Grimes Lodge, Civic Campus

Coming together
Staying together

Combined Mother-Baby Hospital Care

The Ottawa Hospital | L'Hôpital d'Ottawa

The Childbirth Centre

Keeping you close, the way nature intended

COMBINED MOTHER-BABY CARE IS A PHILOSOPHY OF CARE THAT WAS DEVELOPED FOLLOWING RESEARCH WHICH SHOWED THAT NEWBORNS AND THEIR MOTHERS DO BETTER WHEN THEY ARE KEPT TOGETHER IN THE SAME ROOM THROUGHOUT THEIR HOSPITAL STAY.

Hospitals throughout North America and elsewhere have adopted this model to provide newborns and their moms with the best possible care. Studies show that combined mother-baby care provides significant benefits to both women and their babies, including:

- babies are less stressed, and crying is reduced;
- breastfeeding is more successful, and milk is produced earlier;
- babies are fed sooner, and gain weight faster;
- moms learn to read their baby's unique cues earlier, and gain confidence;
- staff-to-patient ratios are improved;
- parent-baby bond is strengthened.

Health Canada's *Maternity and Newborn Care Guidelines* also support combined care, noting that keeping healthy newborns and mothers together should be a priority, especially in the early days of life.

"I was hesitant about immediate combined care at first, but it really is wonderful for both baby and mother. Thank you for making the birth of my child a wonderful experience!"
—new mom

What about sleep?

Many moms worry about not being able to sleep if their baby is with them, but studies show that women and their newborns actually sleep better when they are together. Both mom and baby take comfort in knowing that the most important person in each other's life is only an arm's length away.

Help when you need it

Combined mother-baby care is a more family-centred approach to care. It recognizes that you and your family are the main caregivers for your baby, supported by your nurse and other hospital care providers.

Together, you and your baby are cared for in your hospital room, during the day and at night.* Your nurse will provide guidance and help and learning opportunities to you and your family, and will care for your physical and emotional needs and those of your baby.

At all times, we strive to provide a level of care, education and support that reflects what you and your family need and want.

To find out more about combined mother-baby hospital care, talk to your health care provider.

"Women need to be cared for within the context of their families. Mothers and infants are to be cared for as a unit, and should not be separated unless absolutely necessary."
—from Health Canada's *Maternity and Newborn Care Guidelines*, 2nd edition, 2000

Promoting the well-being of both you and your baby by providing:

- *Support* for the growing relationship between you, the baby's father/your partner and family;
- *Support* for the development of your baby's feeding skills;
- *Support* that strengthens your knowledge and confidence in yourself and in your ability to care for your baby;
- *Support* for your personal family/cultural situation.

* When combined mother-baby care is not advisable, a newborn may be kept under observation elsewhere. For example, babies born after less than 36 weeks gestation, those with low birth weights or other health concerns, or when the mother is unable to participate in the baby's care.

"Women need to be cared for within the context of their families. Mothers and infants should be cared for as a unit, and not be separated unless absolutely necessary."

Coming together
Staying together

COMBINED MOTHER-BABY HOSPITAL CARE

What is combined mother-baby hospital care?

Combined mother-baby hospital care is a philosophy of care based on research which shows that newborns and their mothers do better when they are kept together in the same room during their hospital stay.

Hospitals throughout North America and elsewhere have adopted this model of care to provide newborns and their moms with the best possible care. Research shows that keeping moms and their newborns together provides significant benefits to both women and their babies, including:

- babies are less stressed, and crying is reduced;
- breastfeeding is more successful, and milk is produced earlier;
- babies are fed sooner, and gain weight faster;
- moms learn to read their baby's unique cues earlier, and gain confidence;
- mothers and babies sleep better;
- staff-to-patient ratios are improved;
- parent-baby bond is strengthened.

The Ottawa Hospital | L'Hôpital d'Ottawa

The Childbirth Centre

To find out more, talk to your health care provider.