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# **BRIDGING THE GAP IN THE CHAIN OF CARE FOR EXPECTANT AND NEW MOTHERS**

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## ABSTRACT

**Background and aim:** Professional support from midwives and child health care nurses is important in the early postpartum period. The dramatic decrease in the length of postpartum hospital stays that has occurred in western countries requires that attention be paid to the continuity of care for expectant and new mothers. The aim of this thesis was to explore professionals' and mothers' perception of support and continuity in the chain of care for expectant and new mothers.

**Material and methods:** Both qualitative (study I and II) and quantitative (study III and IV) research methods were selected. Studies I and II used a grounded theory methodology approach. In study I, thirty-two midwives and child health care nurses were interviewed in five focus groups and two individual interviews. In study II, multiple data sources were used that comprised structured interviews with midwives and child healthcare nurses (n=20), as well as mothers (n=21), participant observation, and written material. Studies III and IV were based on the same cohort of mothers, using a cross-sectional questionnaire survey focusing on mothers' satisfaction with support from antenatal care (AC), postpartum care (PC) and child health care (CHC) during the first two weeks after childbirth (n=546). In study III, descriptive and logistic regression analyses were performed. In study IV, a mixed method design was used by logistic regression and content analysis.

**Results:** A theoretical model was created that explained why collaboration between midwives and child health care nurses is not realized even when there are visions of such collaboration. Barriers to linkage included lack of professional benefit and link perspective, while facilitators were chain of care perspective and professional benefit. Three main strategies to achieve linkage in the chain of care were identified, termed: transfer, establishing and maintaining a relationship, and adjustment. These strategies for continuity formed the basis of the core category: professional joint action. In all three strategies for continuity, midwives and child health care nurses worked together. In addition, mothers benefited from the professional joint actions and recognized continuity of care when strategies for continuity were implemented. Mothers' perceived satisfaction with professional support during the first two weeks after childbirth showed that fifty-three percent of the mothers rated the support received as sufficient or more than sufficient, 29.7% as neither sufficient nor insufficient, and 17.7% as insufficient or completely insufficient. As many as 17% of the mothers in the study population visited hospital emergency departments during the first two weeks after childbirth, as a result of problems related to delivery, breastfeeding, or infant health. A higher frequency of such emergency visits was associated with poor perception of professional support, low sense of coherence, and delivery complications. A large discrepancy showed up between AC, PC and CHC. Mothers were satisfied with support from health care nurses at CHC but they missed follow-up contacts from midwives at AC and PC. Nearly 40% of the mothers commented on insufficient support. They lacked continuity and found support regarding their physical and emotional health insufficient. Having fewer than 37 gestation weeks was associated with reduced satisfaction with both AC and CHC. Mothers making emergency visits during the two first weeks were more likely to be dissatisfied with support from PC.

**Conclusions.** All links in the chain of care are important to support mothers during the first two weeks after childbirth; nevertheless, the results indicate a lack of continuity in postpartum care. Continuity needs to be improved in order to raise the quality of care for new mothers by increasing the linkage in the chain of care for expectant and new parents.

## LIST OF PUBLICATIONS

This thesis is based on the following studies, referred to in the text by their Roman numerals:

- I. Barimani, M & Hylander, I. Linkage in the chain of care: a grounded theory of professional cooperation between antenatal care, postpartum care and child health care. *International Journal of Integrated Care* 2008;8; Dec. ISSN 1568-4156
- II. Barimani, M & Hylander, I. Joint action between child health care nurses and midwives leads to continuity of care for expectant and new mothers. *International Journal of Qualitative Studies on Health Well-being*. 2012; 7:18183
- III. Barimani, M; Oxelmark, L; Johansson, S-E; Langius-Eklöf, A; Hylander, I. Professional support and emergency visits during the first two weeks postpartum. Submitted
- IV. Barimani, M; Oxelmark, L; Johansson, S-E; Hylander, I. Professional support and continuity of care during the first two weeks after childbirth. Submitted

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## LIST OF ABBREVIATIONS AND DEFINATIONS

AC	Antenatal care
PC	Postpartum care
CHC	Child health care
SOC	Sense of coherence
GTM	Grounded theory methodology

### DEFINITIONS USED

**Antenatal care:** Antenatal care means health care given before birth, including counselling, education, screening, treatment and promotion of well being for the foetus and mother [1].

**Maternity care:** Care in relation to pregnancy, childbirth and the postpartum period.

**Intrapartum care:** Care in relation to the medical and nursing care given to a pregnant woman and her family during labour and delivery.

**Normal birth:** Definition of normal birth is: spontaneous start of labour, remaining low-risk, and infant born spontaneously between 37–42 weeks of pregnancy. Infant and mother in good condition after birth [2].

**Postpartum:** Postpartum, also called the puerperium, starts after the birth of the placenta and ends 6 weeks after birth [3].

**Multipara:** More than one child.

**Primipara:** First child.

**Nurse-midwives:** In Sweden nurse-midwives are working in maternity care. They have 1.5 years of midwifery training in addition to a three-year nursing program. In this thesis they are referred to as midwives.

**Primary child health care nurses:** Have a three-year nursing program with one year of special training in paediatric or in public health care. Referred to as CHC nurses in study I, II and in the thesis summary. Primary child health care nurses in study III and IV.

**Professionals:** In this thesis the overriding word professionals will be used when describing both midwives and primary child health care nurses.



# 1 INTRODUCTION

There are several important professional actors in the health care system in the early postpartum period: antenatal care (AC), postpartum care (PC) and child health care (CHC). The need for new research about support in this period has increased due to inception of a policy of reducing the length of maternal hospital stays in all western countries [4].

As a new nurse, I started working in a paediatric hospital emergency department and saw parents in distress bringing their healthy infants to the emergency department. Parents didn't seem to have enough support and felt insecure, and this made me wonder why parents lacked this support. After training to become first a midwife and later a paediatric nurse, I had the opportunity to work along the entire chain of care for expectant and new mothers. A qualitative study on new mothers' experience of support in the postpartum period resulted in a master's thesis showing that mothers wanted more support after childbirth, which was in line with WHO recommendations that more attention has been paid to pregnancy and birth than to postpartum care [3].

This awareness and my own experiences in the entire chain of care for expectant and new mothers made me curious of "gaps" in the "chain of care for expectant and new mothers" and how other nurses and midwives and the mothers themselves pictured the support from AC, PC and CHC in Sweden. The rationale for this thesis is to contribute to a greater emphasis and a better understanding of support and continuity of the chain of care for expectant and new mothers. This thesis has its main focus on the nearest weeks after childbirth.

## **2 THE AIMS OF THE THESIS**

### **2.1 GENERAL AIM**

The general aim of this thesis was to explore professionals' and mothers' perceptions of support and continuity in the chain of care for expectant and new mothers.

### **2.2 SPECIFIC AIMS**

To explore the midwives' and CHC nurses' experience of collaboration in the chain of care for expectant and new mothers (Study I).

Conceptualize barriers and facilitators of collaboration in order to generate a substantive theoretical model (Study I).

To investigate strategies for continuity of care for expectant and new mothers, as experienced by both midwives/CHC nurses and mothers (Study II).

Elaborate on the preliminary substantive grounded theory model of "linkage in the chain of care" (Study II).

To investigate mothers' perceived satisfaction with professional support during the first two weeks after childbirth (Study III).

To investigate the association between seeking emergency care during the first two weeks after childbirth and perceived satisfaction with professional support (Study III).

To investigate mothers' perceived satisfaction with AC, PC, and CHC during the first two weeks after childbirth (study IV).

To explore what kind of support mothers desire from AC, PC and CHC (Study IV).

### **3 THEORETICAL FRAMEWORK AND CONCEPTS**

This thesis is within the discipline of “caring sciences”. Caring sciences is a term for research in nursing, occupational therapy and physiotherapy. What connects them is that they cover theory and methods to study problems and actions related to human health and caring in different contexts and environments [5]. This is an empirical thesis within a pragmatic tradition [6, 7]. Caring sciences is a new discipline and thus a new arena in an academic context, where conceptual development is essential. The following is a review of the concepts investigated in the thesis.

#### **3.1 CONTINUITY OF CARE**

Continuity of care is difficult to measure since it is a construct with multiple concepts and relates to different organizational levels and includes various aspects of health care services [8]. Moreover there is a lack of theoretical analysis of the concept and a need for conceptual models [8]. The variety of research methods and designs that have been used points to the need for multiple methods to promote understanding of this complex concept [8, 9].

All types of continuity may improve quality of care [10] but the relationship between a physician and his patient [11], and in particular patients with chronic conditions [12], seems to be most studied.

Haggerty et al. [10] reviewed the literature from different fields based on different healthcare domains (mental health, primary care, nursing and disease management) that made a platform for the concept of continuity of care. Haggerty et al. [10] defined continuity of care as “continuity is the degree to which a series of discrete health care events is experienced as coherent, connected and consistent with the patient’s medical needs and personal context”. Moreover, two core elements have to exist to achieve continuity of care: care delivered to an individual patient and care delivered over time. From a patient perspective, experience of continuity means that a care provider who knows the patient well will also care for him or her in the future. The provider knows what happened before and different providers will agree on a management plan. However, the experience of continuity of care may differ for the health care provider and the patient. From a provider’s perspective, sufficient information and knowledge about a patient seems to be most important. Three types of continuity were distinguished: informational continuity, relational continuity and management continuity [10]. These established concepts of continuity of care will be discussed in the context of the results from this thesis.

Continuity of care for expectant and new mothers means that a link must be established and kept between reproductive health and child health care services [3]. This thesis focuses on the level of continuity provided by professionals working in direct contact with parents.

##### **3.1.1 Informational continuity**

Information linking care providers and healthcare events together could be seen as the common thread of continuity. Documentary information focuses on the medical care, but knowledge about the patient’s values, preferences, and context is equally important for bridging different care events [10].

Generally Swedish obstetric patient records from pregnancy are transferred to intrapartum and postpartum care. After delivery, a written obstetric summary is sent to AC and written summaries of the child to CHC. According to recommendations from County Council Stockholm, mothers should be introduced to CHC during late

pregnancy [13]. In case of special conditions and if mothers give their consent, information should be transferred to CHC [13], but problems in this transfer have been described [14]. Typically, parents contact CHC approximately six days after hospital discharge [14].

To our knowledge, not much has been studied concerning information continuity in the chain of care for expectant and new mothers. An Australian study found that the most effective strategies for transition of different care models between AC and CHC were 1) structured written summaries sent to CHC 2) a central person responsible for the discharge process, communicating between AC and CHC and informing each mother 3) purposeful face to face contact between AC and CHC with high risk mothers [15].

There is little doubt about the importance of transferring the medical record from AC to intrapartum and PC, while the importance of transfer between AC and CHC is less clear. Studies stressing the importance of information transfer from AC to CHC point out the need to identify mothers at risk during pregnancy and in need of special support after childbirth, i.e., mothers without support from partner [16], mothers at risk for postpartum depression [17-19] or at risk for posttraumatic stress [17].

### **3.1.2 Relational continuity**

Relational continuity means that patients have a sense of coherence and can predict that a provider (or a consistent core of staff providers) who cares for them will also care for them in the future. Relational continuity will thereby bridge past, current and future care [10]. Generally, relational continuity is related to decreased rates of hospitalization, improved preventive services [9, 12], higher patient satisfaction [12, 20] and decreased rate of visits to emergency departments [12].

Relational continuity in maternity care focuses on the ongoing relationship between caregivers and mothers [21, 22]. Team midwifery refers to the same caregivers in a team throughout pregnancy, intrapartum and postpartum care. Studies have shown that mothers did not want too many caregivers in the antenatal period and that team midwifery in this period was related to increased satisfaction [23, 24]. In general, Swedish mothers meet a maximum of two midwives during pregnancy [25].

### **3.1.3 Management continuity**

In management continuity, different providers agree on a common management plan, sharing care protocols and plans to provide security and predictability both for providers and patients [10]. It has been suggested that one way to improve early postpartum care is to ensure consistency in guidelines and protocols [26] but not many studies have been done regarding management continuity in the chain of care for expectant and new mothers. The emphasis in the few existing studies underlines the need of a consistent policy on how to support mothers while breastfeeding and how to give consistent advice [26-29].

### **3.1.4 Summary: Continuity of care**

Informational continuity means information being transferred between care units in the chain of care for expectant and new mothers. Written information is the most common form in Sweden to transfer information [10]. Relational continuity improves patient satisfaction and the most studied form is team midwifery care, which, however, is not common in Sweden. Management continuity has only been studied from the viewpoint of a common policy on breastfeeding support in Sweden. How mothers and professionals experience informational continuity, relational continuity and

management continuity in the chain of care for expectant and new mothers is not well studied. The concept of continuity of care is closely related to the concept of chain of care.

### 3.2 CHAIN OF CARE

Chain of care is a concept widely used in Sweden. It has been defined as “linked coordinated activities including all health care providers serving a specific patient group within a county with the aim of providing good quality care for patients” [30]. The concept “chain of care” is an illustration of continuity of care where each link in the chain represents one type of care unit with its services and operations. The services include medical investigation, treatment, care, controls and processes in hospital departments and primary care both for curative and preventive interventions and the everyday lives of the patients [31].

A chain of care is complex, with different organizations, professionals, constitutions and goals [31]. A chain of care could vary through pregnancy, childbirth and the postpartum period depending on psychological or physical complications, which could include several professionals. This dissertation describes that part of the chain of care for expectant and new mothers (AC-PC-CHC), which includes services from midwives and CHC nurses working in AC, PC and CHC. As important as intrapartum care is, it was not possible within the scope of this thesis to also include intrapartum care. Other professionals such as obstetricians, paediatricians and physiologists have more sporadic contacts and do not see all mothers. This thesis also puts a somewhat greater emphasis on midwives in AC and CHC nurses than on midwives in PC, since they have a much longer relationship with the expectant and new mothers. Studie I, III and IV focus on the entire chain of AC-PC-CHC, while article II focuses on AC and CHC.

Chain of care for expectant and new mothers is thus described as a chain in which each care unit constitutes a link; the care units may function as separate links or be linked to form the AC-PC-CHC chain of care (figure 1).

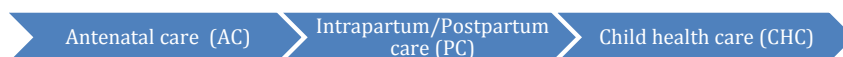


Figure 1. Chain of care for expectant mothers and new mothers

### 3.3 PROFESSIONAL COLLABORATION

Co-ordination, co-operation and collaboration have several different meanings in the literature [32]. According to Axelsson [33], integration is a superior concept, which means that different services and activities are brought together. There are different forms of integration; *vertical integration* integrating organizations with a hierarchical structure, and *horizontal integration* integrating organizations on the same hierarchical or status level. *Co-ordination* can be defined as having a low degree of horizontal integration and a high degree of vertical integration. *Collaboration* has a low degree of vertical integration and a high degree of horizontal integration. *Co-operation* has a high degree of both vertical integration and horizontal integration. Co-operation and collaboration are mainly used in the public health sector.

Co-operation was used in study I, and collaboration in study II and the thesis summary. The reason for this is the increasing focus in this thesis on interactions between professionals in direct contact with patients and in different care units, and not on the managerial level; thus, horizontal processes have been emphasized.

Collaboration according to Axelsson [33] means there has to be a willingness to work together through intensive communication and contact and that agreements between organizations are voluntary, which is also in line with how the concept is used in this thesis.

Axelsson [34] described some principles to achieve collaboration in health care: 1) regular meetings for information exchange, 2) common agreements and guidelines, 3) case managers who lead integrated activities, and 4) co-localisation.

Huxham [32, 35-37] studied collaboration in practice and developed a practice-oriented theory to understand joint work across organizations. Two concepts were central for collaboration: the *collaborative advantage* and the contrasting *collaborative inertia*. To get the advantage of collaboration means that collaboration must achieve an output that could not be provided by acting alone in an organization. However, collaborative inertia often occurred, meaning there was in reality no increase in output achieved by collaboration [35-37].

Huxham [35-37] emphasized five overlapping themes important to collaboration: *trust, common aims, power, membership structures and leadership*. *Trust building* should be the focus in the beginning of a collaborative work. Why joint work is necessary has to be clarified and clear sets of *common aims* must be introduced. It's important to consider the *power structure* and how power influences communication and processes. *Leadership* in collaboration is crucial and is the mechanism that "makes things happen"

Collaboration between professionals in the welfare services is called for and deemed necessary [34]. Reports from the Stockholm Council stress the importance of collaboration in order to provide mothers with continuity in the AC-PC-CHC chain of care [38-41], and other studies have emphasized the importance of collaboration for better support to mothers [17, 42, 43].

### **3.3.1 Summary: Professional collaboration**

A willingness to work together by intensive communication and contact between the different organizations and professionals is presumptive to collaboration, according to cited studies. Mutual understanding and common aims, are other factors held to be important for successful collaboration. Management in the AC-PC-CHC chain of care have formulated clear visions about the need for collaboration [38-41]; however, reports on how to create collaboration in the AC-PC-CHC chain of care are lacking. A reason for this might be that there has been little research on collaboration in the AC-PC-CHC chain of care to guide the practice.

## **3.4 THE PROCESS OF BECOMING A MOTHER**

To become a mother is a process of constant learning and overwhelming change [44], and some mothers have been shown to have fears and anxieties around their changing role [45] and their new responsibility for a child that may cause overwhelming strain [46].

Mercer [47-53] developed a model with four stages in the role of becoming a mother: 1) pregnancy involves attachment to the unborn child, commitment and preparation for the role, 2) birth and the following weeks involve identifying how to care for the infant, increasing attachment to the child and physical restoration, 3) the first four months involve increased confidence and establishment of a new family, 4) by four months, the mother has become attached to the infant and has confidence in her maternal role. Several conditions influence these stages, such as: socioeconomic status, age, birth experience, social stress and support, early separation from the infant and health status.

Since transition to motherhood can be stressful, coping strategies become interesting to study [3]. Aaron Antonovsky, a medical sociologist provided a useful theory to support understanding of what creates wellbeing, health and coping strategies. He developed a theory of successful coping, *sense of coherence* (SOC). People have a number of resources to handle different types of stressors in everyday life, shaped by knowledge, character, life experience, intelligence, wealth, cultural stability and social support. Sense of coherence means that life events are experienced as manageable (a belief that you have recourses to meet demands of life), comprehensible (life events are predictable and understandable) and meaningful (demands are worth making an effort to address them). SOC cuts across culture, religion, gender and social class [54-56]. To operationalize SOC, Antonovsky developed a quantitative tool, the SOC scale. People who score high on the SOC scale tend to cope better with stressful situations, find appropriate solutions, and resolve conflicts through adaptability [55].

The SOC scale has been utilized within maternity care and suggested for use in maternity care as a screening instrument in pregnancy [57], to predict post-traumatic stress in women who have undergone emergency Caesarean sections [58] and to predict satisfaction in postnatal hospital care [59].

### **3.4.1 Summary: Becoming a mother**

Becoming a mother is a stressful event and mothers need to cope with the new situation. The SOC scale has been used in maternity care to measure the ability to cope with stressful situations.

## **3.5 PROFESSIONAL SUPPORT AND MATERNAL SATISFACTION**

Mercer [53] emphasized the role of the nurse as an important person in the transition to motherhood. She gave examples of how to support mothers through nurse interactions: identification of mothers' needs, identification of mothers' available resources among friends and families, home visits, support groups, medical follow-up, and feedback on mothers' interacting and caretaking skills with their infants. Furthermore, the nurse should have an interactive and emphatic dialog.

Satisfaction with care is widely used as a measurement of quality of care, but seldom defined. Measurement of satisfaction could be asking patients to rate the quality of service they received or to report their experience of the qualities of services [60]. The factor with the greatest impact on satisfaction is the practitioner-patient relationship; another factor is the patient's health status or health outcome [60]. Two studies have discussed aspects of maternal satisfaction [61, 62]. Walderström & Rydman [61] argued the importance of understanding patients' experiences and identifying problem areas when measuring satisfaction, in contrast to global survey questions. Van Teijlingen et al, [62] argued that satisfaction surveys should be used with caution when shaping maternity care organizations since mothers have a tendency not to be critical of the care they received.

## 4 SETTING AC-PC-CHC CHAIN OF CARE

### 4.1 THE AC-PC-CHC CHAIN OF CARE

Maternity care and child health care are part of the public sector and financed through taxes. There are also privately run outpatient clinics covered by taxes. Antenatal clinics and hospital delivery departments are mostly separate units, administratively and spatially. The midwives who meet the women during pregnancy are not the same midwives the women meet during childbirth. In addition, there are other midwives meeting the mothers during their postpartum hospital stay. Midwives in AC and CHC nurses mostly work in the public primary health care sector, but in administratively and spatially separated units (table 1). “Family centres”, are an exception, where midwives and CHC nurse are collocated. The definition of a family centre is a service centre where AC, CHC, social workers and an open nursery school for children aged 0–6 (accompanied by parents) are integrated for preventive purposes for families in a specific district. There are 131 such family centres in total in Sweden [63].

**Table 1.** A typical context of care for expectant and new mothers in Sweden

Type of care	Antenatal care	Intrapartum care	Postpartum care	Child health care
<b>Type of clinic</b>	Antenatal clinics	Hospital delivery department	Hospital wards	Child health clinics
<b>Duration of responsibility</b>	Pregnancy. Postpartum visit within 12 weeks.	Childbirth	One week after delivery	Child 0-6 year
<b>Professionals</b>	Midwives. Normal pregnancy, 0-1 routine visits to obstetrician.	Midwives. Normal childbirth, mostly no obstetrician involved.	Midwives. Normal postpartum period, mostly no obstetrician involved.	Primary child health care nurses. Healthy child (<1 year), about 4 routine visits to physician
<b>Management</b>	Primary health care	County Council	County Council	Primary health care

### 4.2 ANTENATAL CARE (AC)

The national guidelines on antenatal care are to support the natural process of pregnancy but also to prevent and help mothers with medical, psychological and social needs and preparation for childbirth and parenthood [64, 65]. The midwives are the primary caregivers for women during pregnancy and the care is mostly provided in local antenatal clinics within the public primary health care sector. If complications occur during pregnancy the women will see an obstetrician. How many times a pregnant women will see the midwife during pregnancy depends on medical or other factors. In general a primipara will have nine visits and a multipara eight visits. Women are offered an ultrasound examination about gestation week 18–20, usually performed by a specially trained midwife. If parents are expecting their first child they are offered participation in parent education classes [13, 25]. Approximately 8 % of mothers had



met their antenatal midwife within the first two weeks after childbirth. Within the first three months after childbirth, 77 % of the mothers had met their antenatal midwife [66].

### **4.3 INTRAPARTUM/POSTPARTUM CARE (PC)**

Care during delivery aims to promote healthy mothers and children, but also a positive experience of childbirth [13]. Almost all women give birth in hospitals. Midwives are the primary caregivers for mothers during intrapartum and postpartum care, with the exception of caesarean section and instrumental vaginal birth. Obstetricians, anaesthesiologists and paediatricians are available in the hospitals. Postpartum departments in the hospitals are responsible for mothers and children one week after childbirth. Between 1993 and 2005, the Swedish national definition of early discharge was that women and infants were discharged together from hospital no less than six hours and no later than 72 hours postpartum [67]. Since 2005, this definition has meant soon after delivery with a minimum of six hours [68]. Therefore it is up to each manager in the delivery and postpartum departments to have safety requirements for effective systems of monitoring and support for mothers and children after hospital discharge. These may lead to inconsistencies in Sweden with respect to how best to support mothers during postpartum, as routine checks such as temperature, involution, and healing of perineal ruptures are no longer performed in all Swedish hospitals [69]; but there are also inconsistencies in how to support mothers after their homecoming. Some mothers receive a home visit, some are contacted by telephone and some mothers receive no support at all [70].

### **4.4 CHILD HEALTH CARE (CHC)**

The national guidelines for child health care include education and information about childcare, health promotion, immunization programs, health check-ups with development screenings and support in parenthood. CHC is mostly integrated into primary care. The CHC nurse is the key person in primary child health care. The CHC nurse has close contact with parents during the infant's first months; domiciliary visits, clinical visits, telephone consultations and parent education classes. The domiciliary visits, where the aim is to create good relationships between families and CHC are well documented with positive outcomes [40]. The CHC nurse offers parents a contact within one week after discharge from hospitals [40], but at what time point the mothers initially meet CHC varies [42]. Since time spent in hospital after delivery is short, CHC has a greater responsibility today: to discover signs of serious mood disturbance [71] and give advice and support in breastfeeding [42].

### **4.5 ROLE OF AC AND CHC IN PARENT SUPPORT**

Maternal and child health services reach all social classes and have an attendance of nearly 100% of pregnant women and families with children age 0–6 years [72]; hence, AC and CHC are a very important part of family support [29]. Parent support is important throughout the entire chain of care from early pregnancy through child health care [29, 73]. Since early parent-child interaction is crucial for the child's emotional and social development, methods in AC and CHC should focus on strengthening the competence of parents and preparing them for parenthood [72, 73]. According to the National Board for Health and Welfare, collaboration between AC and CHC is a prerequisite for parent support; ways to provide parent support could include keeping the same group of parents in parent education between AC and CHC [74]. Parents usually appreciate parent education, as it involves parents in a social network; however, it does not reach all parents [75, 76].

#### **4.6 THE AC-PC-CHC CHAIN OF CARE IN STOCKHOLM COUNTY**

Stockholm County has 56 antenatal clinics, 145 child health clinics and seven delivery departments. The majority of the clinics are public, but private hospitals and clinics are also available. According to the Swedish Medical Birth Register in Stockholm County the length of stay at hospital after childbirth is now one to two days for a normal delivery and three days for a Caesarean section [77]. If mothers and newborns are discharged within three days after childbirth they are offered a check-up for the newborn in hospital (PKU-test, hearing test) and breastfeeding support [13, 40]. The county council of Stockholm recommends AC see new mothers within the first ten days. However, a later recommendation is to meet the mothers within the three first months [13, 39].

#### **4.7 FINDINGS FROM THE AC-PC-CHC CHAIN OF CARE**

A survey was conducted in 2006 by Barimani [78] to bring into focus whether and how AC and CHC collaborated to support mothers, especially after hospital discharge. At this time, Sweden had 523 antenatal clinics. These antenatal clinics had 48 midwives who represented these clinics (with a special responsibility for education and integration). All 48 midwives were sent an e-mail with a request to describe if AC and CHC collaborated to support mothers and if so, how? Thirty-five midwives answered, representing 420 antenatal clinics. The findings showed that collaboration between AC and CHC was rare. Collaboration was more common in sparsely populated areas, especially in the northern part of Sweden, but was rare in larger cities. Not sharing the same location was one of the hindrances mentioned for not collaborating. The most common way to collaborate was to meet each other in meetings and have common education programs. Some midwives also said they tried to have joint parent education classes together with CHC. Only a few offered joint domiciliary care and breastfeeding support [78].

#### **4.8 THE AC-PC-CHC CHAIN OF CARE IN OTHER WESTERN COUNTRIES**

It's difficult to draw conclusions about the best support in the AC-PC-CHC chain of care from other western countries, as support differs in so many ways and there are great variations in programs for postpartum care/home visits. Studies often use different definitions of early discharge and focus only on mothers with a normal delivery or with a native language. Furthermore, there are differences in roles and educations for midwives as compared to medical doctors. In some countries medical doctors are the primary care givers for the women and in other countries midwives take the lead in care [4, 79].

#### **4.9 SUMMARY: AC-PC-CHC CHAIN OF CARE**

It has been clarified by the National Board for Health and Welfare that a well-functioning AC-PC-CHC chain of care chain is necessary [68]. However, it is difficult to find documentation on coordination of the links in the AC-PC-CHC-chain of care. The Swedish health care system seems to consist of well-functioning separate links which are an important part of the society.

## 5 RESEARCH ON SUPPORT IN THE POSTPARTUM PERIOD

There are wide variations in postpartum follow up practice described in different studies but there is no single model that can be defined as best practice for postpartum support [80, 81]. Variations relate to *how* mothers should receive support after hospital discharge - by appointments, home visits or telephone contacts? *Where* should the service be, in hospital or by domiciliary service? *When* - how long after the hospital discharge? The postpartum period is a period of dramatic change, yet this period is still often neglected in maternity care [3]. However, positive outcomes of professional support have been reported for preventing postpartum depression [82], breastfeeding support [28, 83], and support for more vulnerable mothers [80]. Studies show a wide range of satisfaction in the AC-PC-CHC chain of care in Swedish studies and mothers seem especially dissatisfied with PC [61, 84-86] compared to AC [24, 85] and CHC [87, 88]. Several reasons were reported for dissatisfaction with postpartum support: negative attitudes from midwives, unhelpful and unfriendly staff [85], lack of support from midwives [84, 85], lack of health-checkups [85, 89] lack of breastfeeding support [85, 89], dissatisfaction with their own needs as new mothers [84, 89] and short hospital stay [84, 90]. In international studies mothers also reported dissatisfaction with postpartum support [4, 91-93].

### 5.1 BIRTH COMPLICATIONS

Caesarean section has dramatically increased during the last decades in the Western world. In the beginning of 1990 the rate of caesarean section was 12 % in Sweden [94]. Today the rate in Stockholm County is 20 % and in the rest of the country 16% [77]. Instrumental delivery (forceps delivery and ventouse extraction) has also increased and today is at 10 % [94]. There are both medical and psychosocial effects on the mother from a caesarean section, but there are also medical effects on the child [95]. Specific obstetric interventions such as episiotomy, caesarean section and instrumental delivery may lead to posttraumatic symptoms. However, a normal delivery may also lead to posttraumatic stress symptoms [17, 96, 97]. Certain circumstances make the maternal transition more difficult, e.g., transfer of the newborn to a neonatal clinic, or difficult postpartum recovery [52, 98]. Complicated deliveries were associated with mothers being more dissatisfied with health check-ups and breastfeeding support [59]. Further, mothers with an infant transferred to neonatal were more dissatisfied in general with postpartum support [84]. Complicated deliveries or transfer of infant to neonatal were also associated with more negative birth experiences [99].

### 5.2 POSTPARTUM LENGTH OF STAY

Since the reduction in maternal hospital stay [81], policy and research have focused primarily on time spent in hospital and maternal and newborn readmission, morbidity and mortality, rather than on the quality of support given to mothers and newborns. There is no clear evidence for optimal time of postpartum length of stay; nor on whether the best service is given at hospital or at home [4, 81]. Studies on early discharge after childbirth suggest it is safe and secure for the mother and child, provided there is some kind of post-discharge nursing or midwifery support and an effective chain of care [4, 100, 101]. However, early discharge has been shown to be a predictor of dissatisfaction [4, 59, 84, 85, 90], but very long (>5 days) postpartum stay was also associated with dissatisfaction with postpartum care [84].

### **5.3 AFTER HOSPITAL DISCHARGE**

Many mothers perceive that their needs for support, starting at the hospital, will continue for many months [92]. Early discharge is not always followed by support during the immediate post-discharge period, and most western countries have poorly developed systems for home-based postpartum care [4, 84]. The general purpose of home visits or frequencies and timing of home visits has not been clarified [3]. In Sweden there has been little expansion in domiciliary services for new parents. Domiciliary services are generally given by CHC nurses [84]. However, there is some evidence that home-based postpartum care can have an effect: decreases in rehospitalization for newborns [102, 103], mothers being more satisfied with breastfeeding support, fewer problems with breastfeeding [83] and increased maternal satisfaction [80, 104-106]. One study showed that the timing of postpartum follow up was considered more important than the type of support. The sooner the contact with a health professional after discharge, either by telephone or home visits, the more satisfied were the mothers [107]. Another study showed no differences in maternal and infant clinical outcomes comparing a telephone call to a routine home visit in identifying mothers in need of more support [108].

### **5.4 EMERGENCY DEPARTMENT VISITS**

There is little information about emergency department use after hospital discharge for mothers in the postpartum period [109] or for newborns [110]. A study from the US showed 3% admittance to an emergency department within 2 months of hospital discharge [111]; another study showed 4.8 % admittance within 6 weeks postpartum [109]. A Canadian study showed that few mothers reported emergency department use [112]. However, emergency department visits occurred mostly within the ten first days after delivery [109] and the third day after hospital discharge seems to be the most crucial [110]. Emergency visits were more common after caesarean than vaginal birth [109, 111].

### **5.5 BREASTFEEDING**

A major goal for postpartum care is to establish and maintain breastfeeding [3]. The Stockholm County Council has adopted a breastfeeding strategy based on a joint declaration from the WHO and UNICEF, as well as a regional care protocol that calls for equal treatment of all breastfeeding complications [113]. Sweden has one of the highest breastfeeding rates among the western countries [42] but as many as 30 % of breastfeeding mothers do experience complications [113].

### **5.6 MOTHER'S PHYSICAL HEALTH**

Physical health problems postpartum are common [3, 114]. During the first days and weeks, pain in vulva and perineum is an important problem for many mothers [3]. Mothers who experienced physical problems were more negative about care [84]. Physical problems may have a negative influence on a mother's emotional wellbeing [115] and may have an impact on childcare behaviour and maternal health [114].

### **5.7 MOTHER'S PSYCHOLOGICAL WELLBEING**

Mood disturbance and emotional instability (Postpartum blues) is so common (30–70%) in first ten days after childbirth that it is considered normal. Postpartum depression occurs between 8-20 weeks postpartum [3], with a prevalence of 13 % [71], and may have a more serious development [3]. Fatigue seven days postpartum could

predict depression one month postpartum [116]. If postpartum blues do not tend to disappear it may be an early sign of postpartum depression [71].

### **5.8 RESULTS FROM A FOCUS GROUP STUDY WITH NEW MOTHERS**

Barimani [117] conducted three focus group discussions with 19 primiparas to describe new mothers' early experiences with becoming mothers. The result showed that mothers experienced an increased sensitivity after giving birth and in some cases they felt slightly depressed. Initially, the majority of the mothers had experienced difficulties with breastfeeding and had wanted more support. Mothers expressed a great need to talk about the first weeks postpartum. The mothers also expressed negative experiences with both PC and CHC, especially regarding inconsistent advices.

### **5.9 SUMMARY: SUPPORT IN THE POSTPARTUM PERIOD**

The time after childbirth seems to be the most stressful period for mothers and also the most neglected period, as far as research is concerned, in the AC-PC-CHC chain of care. Most mothers have a normal childbirth with no complications, but many studies also stress problems, such as troublesome childbirth, breastfeeding complications, physical and psychological problems. Swedish and international studies show that mothers are dissatisfied with postpartum support in hospitals, and that mothers wish for more attention. Professional support typically has a positive impact on mothers' well being, but just how to give effective and adequate postpartum support is still unclear. The extent of mothers' use of emergency departments in the postpartum period is also unclear, as Sweden lacks studies of emergency visits during this period.

## 6 MATERIALS AND METHODS

This thesis is based on four studies, two qualitative studies with a Grounded Theory Methodology approach (GTM) (study I and II) and two studies based on the same cross-sectional questionnaire survey with a cohort of mothers (studies III and IV). Study III is a quantitative study and study IV has a mixed method design with both quantitative and qualitative analysis (table 2).

**Table 2.** Overview of the general design included in this thesis

Study	Design	Data collection	Analysis	Participants	Aspects studied
I	Qualitative	Focus group interviews	GTM	32 midwives & CHC nurses	Barriers and facilitators to cooperation
II	Qualitative	Field study	GTM	20 midwives & CHC-nurses. 21 mothers	Strategies for continuity of care
III	Quantitative	questionnaire	Logistic regression	363 mothers	Professional support. Emergency visits
IV	Quantitative & Qualitative	questionnaire	Logistic regression. Content analysis	363 mothers	Satisfaction with AC, PC and CHC

### 6.1 STUDY I AND STUDY II

#### 6.1.1 Grounded theory methodology (GTM)

##### 6.1.1.1 Why use GTM

As my purpose was to create new knowledge about the AC-PC-CHC chain of care, an area where there has been relatively little research, we chose to apply GTM [118-120], which is a methodology aimed at generating theory. Generating a theory was of special interest in this thesis in order to get a deeper understanding of the processes in the AC-PC-CHC chain of care. GTM seemed particularly suitable as it focuses on interactive processes within an area that is not widely researched, and when the goal of the study is to arrive at a conceptualization of a basic social process.

### *6.1.1.2 Background of GTM*

The discovery of grounded theory was made by the sociologists Barner Glaser, who came from a statistical background, and Anselm Strauss, who came from the Chicago School. They presented a systemic process for qualitative research [119]. Through Anselm Strauss the roots of GTM came from symbolic interactionism, which in turn is influenced by the philosophy of pragmatism [6, 7]. Symbolic interactionism is a theory to understand society and human behaviour through the meaning of events and the symbols people use to convey those meanings [7]. There are several variations of GTM. First, there has been an ongoing debate between Glaser's more classic grounded theory, emphasizing conceptualisation [118, 119] and Strauss and Corbin's [121, 122] more descriptive approach. Recently, Charmaz' book [120] "Constructing GTM" has provided a practical guide for developing GTM. Charmaz used a constructivistic and more interpretative approach to GTM, writing about understanding phenomena rather than explaining them. She further argued that GTM should be used as a flexible and systematic tool to gather and analyse empirical data.

### *6.1.1.3 Main characteristic of GTM*

GTM is a method of conceptualization of empirical data and systematic abstraction [119]. The procedure of GTM comprises the generation of categories and subcategories from data and analysis of the relations between them. Data collection and analysis are a simultaneous process. The constant comparative method is the ongoing process of analysis, comparing data with emerging codes, codes with categories and categories with categories to explore differences and similarities. The outcome of a GTM study is a substantive theory, which means a theory in a specific area [123]. Further, the substantive theory consists of mutual relationships between the concepts and may explain an event or phenomenon, which could in turn lead to actions and be used in practice [122]. According to Glaser, the theory could further be tested by using both qualitative and quantitative methods [118].

### *6.1.1.4 The position of this thesis in GTM*

Hallberg [123] argued that GTM offers a set of flexible guidelines to build a conceptual framework, but it is important to state what kind of guidelines are followed in the GMT approach. In positioning this thesis in the current discussion of GTM, I adhere to a classic GTM concerning technique, theoretical sampling and the pursuit of arriving at a theoretical model [119]. The emphasis on conceptualization is an important part of this approach [118]. Having said this, I believe, however, that the result of a GTM, i.e., the theoretical model, is constructed by the researchers in interaction with data in the way described by Charmaz [120]. This cannot be regarded as an objective process, but the techniques help the researchers keep track of undue bias and sharpen the researchers' awareness of their prior theoretical frameworks. Thus, this thesis should be positioned within constructivist research, which is also in accord with the roots of GTM, i.e., symbolic interactionism [7] and pragmatism [6]. The model created in the first study was elaborated in the second study. Data from the third and fourth studies have further added to our knowledge, resulting in a model summarizing the findings.

### *6.1.1.5 Theoretical sampling in GTM*

A theoretical sample was used in accordance with GTM [119], meaning that the emerging theoretical model was allowed to govern the selection of data and the design of the interview guide. Sampling was refined from open to strategic to variable and, finally, to selective sampling [119, 124].

## **6.2 STUDY I**

### **6.2.1 Research setting**

The material in study I was collected from primary care and from one hospital department in Stockholm.

### **6.2.2 Participants and data collection**

The sample consisted of 32 midwives and CHC nurses who were interviewed in five focus group interviews and two individual interviews. All interviewees were women who had worked in their respective fields between 2 and 30 years (average - 12 years). The sample included 13 CHC nurses from 9 CHC clinics, 15 midwives from 8 AC clinics, and 4 midwives from a hospital with two different postpartum departments (table 3).

Data were mainly collected using focus group interviews, which is a suitable method when the aims are to find out how a particular group views a phenomenon and to lessen the guiding role of the interviewer [125, 126]. To ensure that each professional group could freely express their thoughts, the first four group interviews were conducted in homogeneous groups [125], two separate groups with AC midwives and two with CHC nurses. The 5th group interviews included AC and PC midwives and CHC nurses.

The author was the moderator for all focus group interviews. The moderator introduced the subject but intervened thereafter only if the participants strayed from the subject. The same information about the background and objectives of the study was given to all participants at the beginning of each session. All participants gave their informed consent and confidentiality was assured before the interviews. A semi-structured interview guide was used for the study, with questions ranging from a broader perspective to a more specific one [126]. The subjects covered in the interview guide were cooperation in the chain of care, parental support, and barriers to/facilitators of cooperation. The sessions lasted 60–90 minutes and were recorded and transcribed verbatim. Two individual interviews were conducted in the same manner and lasted 20–30 minutes. Data collection took place over a period of seven months (2006–2007).



**Table 3.** Participants in the different focus group interviews and individual interviews

	Midwives in AC	Midwives in PC	CHC nurses
Focus group 1	7		
Focus group 2	5		
Focus group 3			6
Focus group 4			5
Focus group 5	3	2	2
Individual		2	
<b>Total</b>	<b>15</b>	<b>4</b>	<b>13</b>

### 6.2.3 Theoretical sampling and data analysis

Theoretical sampling and data analysis were done in parallel and in interaction; that is why they are described under the same heading.

To enable the emerging theoretical model to be grounded in data, a coding process was performed. Data were analysed first by open coding of the first two focus group interview transcriptions, which gave a code list of 28 codes and 9 categories. The transcribed interviews were read several times, coded line by line and then shortened into code phrases which reflected the meaning of the data. Codes with similar content were grouped together into more abstract categories.

To fill categories, a decision was taken to conduct two more focus group interviews in homogenous groups for which a new interview guide was subsequently designed based on the categories developed from the analysis of the first two focus group interviews. Questions about meaningful and meaningless cooperation were added. All transcripts were coded according to the coding list; new codes were added and categories were collapsed or developed into main categories with several subcategories.

Relationships between categories were explored and the different patterns, i.e., how the categories could be linked together, were analysed. Strategy was used as a theoretical code in addition to barriers/facilitators. Patterns began to emerge so we could construct some hypotheses that guided the final interviews.

Differences in the experiences of the professionals in the different facilities had been obvious, which we now wanted to explore further. One of these hypotheses was that, in spite of a common vision of collaboration in the AC-PC-CHC chain of care, the experiences of and promotion of collaboration varied between the facilities. It was also clear that even though midwives in AC usually have experience from postpartum wards, in order to obtain a clear picture, midwives from the postpartum ward should also be included. Thus the 5th focus group interview included AC and PC midwives and CHC nurses and focused on barriers and facilitators. In order to increase the variation and saturate the categories, two additional interviews were conducted with postpartum midwives, using a further refined interview guide.

Theoretical saturation was determined when the categories were adequately filled and no additional categories had emerged. A core category (the basic social process) was identified, to which all categories could be related by *linkage in the chain of care*. The analyses were a cooperative process between the supervisor and the authors who attempted to reach consensus.

## 6.3 STUDY II

### 6.3.1 Research setting

The material in study II was gathered from primary care in two different outpatient clinics in Stockholm.

### 6.3.2 Participants and data collection

The sample consisted of 20 midwives and CHC nurses and 21 mothers at two different outpatient clinics, one medical centre and one family centre. Data were collected from interviews, participant observations, and documents (table 4). The interview guide for midwives and CHC nurses included questions about collaboration with midwives in AC or nurses in CHC and their perceptions of mothers' experience of such collaboration. The interview guide for mothers included questions about their perceptions of support and continuity. The interviews were recorded and transcribed verbatim. Participant and low-structured observations were also made at meetings, in the waiting room, and during joint activities that involved both AC and CHC, and these observation protocols complemented the interviews [127]. Field notes were taken during and immediately after low-structured observations, and a research diary was kept. Local documents on strategies for continuity, which were read and used by the midwives and CHC nurses, were used as informational material. Data were collected by the first author over a period of one year (2008–2009).

**Table 4.** Data sources, midwives and CHC nurses (n = 20), mothers (n= 21)

Data sources	Family centre	Medical centre
Interviews: Midwives, CHC nurses (15–40 min)	n = 5 (2 midwives, 3 CHC nurses)	n = 15 (7 midwives, 8 CHC nurses)
Interviews: Mothers (15–40 min)	n = 11 (2 first-time mothers, 9 mothers with more than one child)	n = 10 (5 first-time mothers, 5 mothers with more than one child)
Participant observation (40 hours). Low-structured observations	Waiting room, team meetings, home visits	Waiting room, meetings
Documents	Annual reports	Meeting protocol

### 6.3.3 Theoretical sampling procedure

The sample was a theoretical sample, selected on basis of information gained from the original open sampling procedure in study I. Since a preliminary model had already been constructed, the collection of data was more selective and interviews more focused than during the first stage of open coding, in accordance with GTM. Given that, in study I, strategies for linkage were only discussed as visions, we wanted to study CHC nurses and midwives who actively implemented strategies to achieve continuity. Thus, a theoretical sample of midwives and CHC nurses at two outpatient

clinics where AC and CHC services were located in the same buildings was selected. In the first clinic, “the family centre,” midwives and CHC nurses worked together in an integrated team, whereas in the second case, the medical centre, the management had expressed clear intentions for collaboration between the AC and CHC services. As the preliminary model was constructed on the basis of caregiver interviews, we wanted to study the concept of continuity from both the caregiver and patient perspectives.

The emerging theory and information gained in study I guided the sampling process and the number of interviews needed for saturation. In the family centre all CHC nurses (three) and midwives (two) were interviewed. In the medical centre, 14 out of 20 CHC nurses and all midwives (seven) were interviewed. At different time points, mothers with a child less than 6 months old were approached in the CHC waiting room in both centres and were invited to participate in the study. When it became apparent that middle management in the medical centre had expressed visions about implementing strategies for collaboration, observational data from meetings were included. In the family centre, where professional joint actions were observed, common protocols and written strategies were collected instead. Two interviews were carried out with a CHC nurse and a midwife in the medical centre a year later, after it was discovered that the strategies discussed had not been realised. They were asked whether there had been or was a plan to implement the strategies envisioned and if not, why that was the case.

#### **6.3.4 Data analysis**

The qualitative methods used in this study were complemented by a quantitative analysis. This approach has been proposed in grounded theory, although it is not often used [118, 120]. The interviews and observations with AC midwives, CHC nurses, and mothers were coded line-by-line by constant comparison in order to elaborate on the strategies for continuity. New codes and subcategories were constructed. The main categories from the preliminary model also earned a place in the present data set, but by adding new subcategories, the meaning of the main categories was further altered into more elaborate concepts, and one new main category was added and a new core process was discovered. The first author conducted the line-by-line coding. The two authors processed the subsequent analyses cooperatively and attempted to reach consensus. The discovery of a major difference in implementation of strategies for continuity of care between the two workplaces led to the question of whether patients’ benefits also differed between the two workplaces. For this reason, a quantitative comparison of mothers’ experience of support and continuity of care between the two workplaces was performed. Patient benefit was quantified by coding mothers’ experience of support (overall support, breastfeeding support, mothers’ recommendations for support) and their perception of continuity of care (perception of collaboration between AC and CHC, experience of meeting staff from AC and CHC before and after delivery and whether they knew where to turn to for help or not). The answers were coded as YES or NO. Fisher’s exact test was used to detect possible differences between the samples.

### **6.4 STUDY III AND STUDY IV**

#### **6.4.1 Setting**

The study was performed in Stockholm County, Sweden.

### 6.4.2 Participants

In, 2009, Stockholm County had an annual birth rate of 28,432 children. All women (n=546) in Stockholm County who gave birth to a live baby between March 9–15, 2009 (one week) were identified through Stockholm County's obstetrics database.

### 6.4.3 Data collection and procedure

Questionnaires and information letters were sent to 546 women five to six weeks after childbirth. Two reminders were sent, the first after three weeks and the second after five weeks. Seventeen letters were returned because of wrong addresses. Of the 529 eligible women, 366 (69%) returned the questionnaire. Three questionnaires were excluded either due to linguistic problems (n= 2) or because the child was in neonatal care (n=1).

### 6.4.4 Questionnaires

#### 6.4.4.1 Study-specific questionnaire

To assess mothers' perceived satisfaction with professional support, a study-specific questionnaire was constructed. Perceived satisfaction with professional support was derived from the question "How did you experience the support during the first two weeks after your child was born?" with regard to 1) the child, 2) breastfeeding and 3) the woman's own physical and psychological well-being. All three aspects were available for the three types of support offered, namely, antenatal, postpartum and child health care, giving a total of nine questions. The respondents' answers were rated on a five-point Likert scale ranging from "more than sufficient" to "completely insufficient". Construction of the questionnaire was performed in two steps using a pilot test. In the first step, five women were asked to complete the questionnaire and give comments. In addition, two midwives and two CHC nurses carefully read through and commented on the questions.

The questionnaire was revised according to comments received. In the second step, five additional women were asked to complete the questionnaire and there were no further comments. Internal consistency was calculated by Cronbach's alpha, resulting in a value of 0.87, which is considered to be good.

In study III, a total score for the nine questions was used, with a range from 9 to 45 points. Perceived satisfaction with professional support was stratified into: completely insufficient, 9–17 points; insufficient, 18–24 points; neither insufficient nor sufficient, 25–31 points; sufficient, 32–38 points and more than sufficient, 39–45 points.

In study IV, the score for these nine questions ranged from 3 to 15 points since it was divided respectively into AC, PC and CHC. Perceived satisfactions with professional support (at AC, PC and CHC) were dichotomized into two levels: Insufficient, 3–9 points, and sufficient, 10–15 points.

#### 6.4.4.2 Sense of coherence (SOC)

SOC, which is an established 13-item questionnaire that measures the overall ability to manage stressful situations, was used to assess the mothers' coping strategies. Thirteen items were rated on a seven-point Likert scale with a total score ranging from 13 to 91 points. The higher the score, the higher the SOC [55]. SOC has been validated and has shown good reliability [128]. Cronbach's alpha was 0.86. The SOC scale was stratified

into (according to the distribution: 20%, 60% and 20%) low SOC (13–58 points), moderate SOC (59–79 points), and high SOC (80–91 points).

#### *6.4.4.3 Emergency visits*

Information on emergency visits was obtained by asking the question “Did you seek any form of emergency care for you or your child during the first two weeks after childbirth?” If the women replied, “Yes” they were asked to respond to additional questions about reasons for the visit and type of emergency care received. The variable “emergency visits” was dichotomized into: “Yes” and “No”.

#### *6.4.4.4 Socio-demographic background*

Socio-demographic background information was collected on age, country of birth (Sweden or other), education (primary school, secondary school, university) marital status (married, cohabitant, single/not living with a partner) working status (working, sick-leave, un-employed, studying), annual income and parity (primiparas, multiparas). Age was stratified into: <25, 25–35, and >35 years. Income was stratified into: low (<125 thousand SEK), middle (125–320 thousand SEK) and high income (>320 thousand SEK).

#### *6.4.4.5 Obstetric and infant data*

Obstetric and infant data collected included information on: gestation week at childbirth (<37 weeks, 37–41 weeks or >41 weeks) and whether the child was referred to a neonatal clinic or not. Delivery circumstances were recorded by asking the mother if she had a normal childbirth, a caesarean section or other than normal childbirth. Length of maternal hospital stay was recorded and stratified into: <24 hours, 1 day, 2 days and 3 days or more. Finally, all women were asked if their child was breastfed fully, partly or not breastfed at all.

#### *6.4.4.6 Open ended questions*

To identify if the mothers experienced the support as insufficient and how they would have preferred the support, open-ended questions concerning each link were asked. “If you experienced the support to be insufficient during the first two weeks after your child was born, how would you have preferred the support?”

#### *6.4.4.7 Translation into other languages*

The study-specific questionnaire and information about the study was translated into four languages - English, Spanish, Arabic and Turkish - to get mothers not speaking Swedish to fill out the questionnaire. The questionnaires with information about the study were placed in the waiting rooms of child health care clinics in four typical immigrant areas in Stockholm for a month. Completed questionnaires could be put in a box in the waiting room.

### **6.4.5 Data analysis**

#### 6.4.5.1 Quantitative analysis

Stata version 11 (StataCorp. 2009. Stata: Release 11. Statistical Software. College Station, TX: StataCorp LP) was used to perform all analyses.

In study III, the descriptive analyses of ordinal and discrete variables were presented as mean rank and percentage, respectively. Comparisons between different levels of categorical variables and perceived satisfaction with professional support were made by ordinal logistic regression. Comparisons between different levels of categorical variables and emergency visits were made by Fisher's exact test. The association between the dependent variables (perceived satisfaction with professional support and emergency visits) and the independent variables (socio-demographic background factors, obstetric and infant factors, and SOC) were estimated by odds ratio (OR) with 95% confidence intervals (CI) calculated by ordinal logistic regression for perceived satisfaction of professional support and by logistic regression for emergency visit.

In study IV, the results are presented as percentages. The differences between AC, PC and CHC were tested pair wise by McNemar's exact test (two-sided, separately for each row) and the relations between the dependent variables (perceived satisfaction with support in AC, PC and CHC) and the independent variables (obstetric and infant factors). The differences were considered statistically significant if  $p < 0.017$  ( $=.05/3$ ), adjusted for mass-significance, for each row separately. The sign test gave essentially the same results. Differences within AC, PC and CHC in relation to the obstetric and infant data were first tested by Fisher's exact test. Associations between the dependent variables (perceived satisfaction with support in, respectively, AC, PC and CHC) and the independent variables (obstetric, infant data and emergency visits) were estimated by odds ratio (OR) with 95% confidence intervals (CI) by applying logistic regression.

#### 6.4.5.2 Qualitative analysis

The written comments from the open-ended questions were analysed using content analysis [129, 130]. The type of content analysis used could be described as directed (using preconceived categories) and quantitative (summing up the extent to which each category was used) [131, 132].

The mothers could comment on all three links – to AC, PC and CHC - separately and some mothers gave more than one comment to each link. A total of 230 comments were recorded. Preconceived concepts were used as a basis for categorisation [129, 133]. The main categories, *support* and *continuity*, were guided by study II. Support was categorized into *breastfeeding support* and *attention to the mothers*, guided by another study [89] focused on support after childbirth. Continuity was categorized into *relational continuity* and *management continuity* in accordance with two types of continuity of care described by Haggerty et al. [10]. The analysis was carried out in several steps. At first, all the written comments from the questionnaire were compiled in one document, which was read through several times. The comments were short and each was considered a meaningful unit. Each meaningful unit was sorted into a category (support or continuity), and a subcategory (attention to the mothers, breastfeeding support, relational continuity, management continuity). The content in each subcategory was analysed and the meaningful units were given codes and sorted into lower-order categories. The comments for each code, subcategory and category were quantified. To ensure trustworthiness, the research group critically checked all steps in the process until consensus was reached.

#### *6.4.5.3 Analysis of the translated questionnaire*

An analysis of the translated questionnaires was not conducted because of the low response rate (n=10).

### **6.5 ETHICAL ISSUES**

The projects were approved by the Research and Ethics Committee at Karolinska Institutet, Stockholm. Their registration numbers were: study I (2006/816-31), study II (2008/1241-31/3), and studies III and IV (2008/1241-31).

For studies I and II, written informed consent was obtained from the heads of nurses. All participants gave their informed consent and confidentiality was assured before the interviews. For studies III and IV, the information letter stated that participation was voluntary and the results would be treated confidentially. The completed and returned questionnaires were viewed as informed consent.

## 7 MAIN RESULTS

This section presents results from studies I, II, III and IV. Finally, a theoretical model will be presented to illustrate the studies.

### 7.1 MAIN FINDINGS

Although professionals in all links of the chain of care agreed on the fact that linkage, i.e., continuity of care, would be beneficial for expectant and new mothers, they also agreed that such a linkage had not been achieved. Several barriers were identified such as *lack of professional gain* (benefit) and *first or middle position* in the chain of care. A *link perspective*, which meant that their own care unit was prioritized and actions taken were not seen as part of the chain of care, was also an impediment to linkage. Facilitating factors were *professional gain* (benefit) and *last position* in the chain. As the last link, CHC nurses promoted linkage most strongly as they had the greatest benefit from such linkage. A *chain of care perspective*, i.e., when professionals base their reasoning on the entire chain of care and are knowledgeable about the other links, also facilitated linkage (Study I).

*Professional joint action* was the best way to describe the strategies for continuity employed by midwives and CHC nurses working under the same roof. They acted together, in the same place, at the same time with the same mother or with a common task and used three different strategies, *transfer*, *adjustment* and *establishing and maintaining a relationship*. When professionals reported that strategies for continuity were employed, mothers also recognized and appreciated the strategies for continuity. Mere visions from the professionals about strategies for continuity were not enough to instigate continuity of care; neither were *chain of care perspective* or *professional benefit*. Instead it seemed that professional joint action promoted a *chain of care perspective* and *professional benefit*, which in turn could facilitate professional joint action and lead to patient benefit (Study II).

As many as 17% of the women in the study population visited hospital emergency departments during the first two weeks after childbirth due to problems related to delivery, breastfeeding or infant health, indicating a gap in the chain of care in the early postpartum period. Mothers with a lower sense of coherence and those who had had a complicated delivery both experienced less adequate support and turned to emergency departments more frequently (Study III).

Mothers viewed support differently from AC, PC and CHC during the first two weeks after childbirth, according to both the quantitative and qualitative analyses. When comparing the differences between AC, PC and CHC, women were in general most satisfied with support from CHC and least satisfied with AC, which is not surprising given the focus of the questionnaire in the first two weeks, when mothers typically do not meet AC. Thus, the interpretation is not that mothers were dissatisfied with the care they had received from AC but with the care they had not received. Thirty-eight percent of the women commented on insufficient support during the first two weeks. Mothers commented on lack of continuity, they missed follow-up contacts from midwives at AC and PC and wanted more attention paid to their own physical and emotional needs (Study IV).



## 7.2 STUDY I

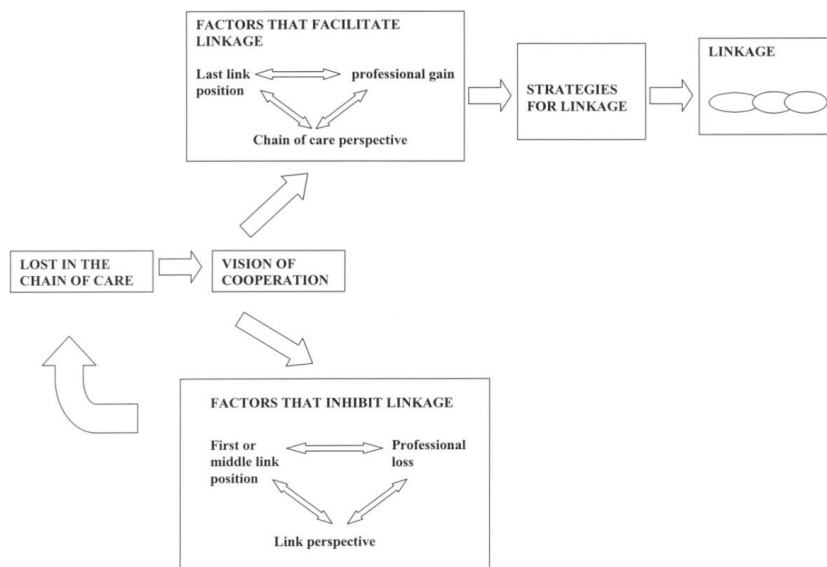
This study aimed to explore the professionals' experience of cooperation in the chain of care. The professionals' main concern was that mothers were lost in the "chain of care" and thereby had a vision of a closer linkage between AC, PC and CHC. The proposed theoretical model presented in this study yields a hypothesis about why linkage in the chain of care is not achieved, in spite of well-known strategies and in spite of a common understanding of the importance of such linkage. The substantive grounded theory of linkage in the three-link AC-PC-CHC chain of care is illustrated in the theoretical model shown in Figure 2.

Despite the fact that midwives as well as CHC nurses acknowledged that parents are lost in the chain of care and that they have common visions about cooperation, cooperation is not achieved because of interacting barriers that have different influences on the three links in the chain. Little or no professional gain through cooperation is achieved by the first position in the chain (AC), which, in turn, is suggested to enhance a "*link perspective*". The first link does not need information from the other links and is not dependent on their work. Thus, little cooperation is achieved (no joint activities, no transference of information and no adjusted policy) and therefore they are still lost in the chain of care like the parents. But as they acknowledge that the parents are lost, they retain their vision of cooperation.

There is also a proposition concerning facilitators in the chain of care. The last link (CHC) gains professionally from cooperation, as their work will run more smoothly, which in turn enhances a "*chain of care perspective*". In a *chain of care perspective*, the midwives and CHC nurses base their reasoning on the entire chain of care and are knowledgeable about and invested in the other links in the chain of care.

However, for linkage to be achieved, all links must be involved. The position in the chain of care cannot be changed; thus, common professional gains and chain perspective must be emphasized for a linkage to take place, which is done through the strategies of *connection*, *transfer* and *adjustment*.

Transfer refers to information transfer as well as transfer of care concerning women who need special support. Connection refers to joint activities, joint meetings, joint home visits, joint parent training and joint breastfeeding. Adjustment refers to changing policies and patient information towards consensus.



**Figure 2.** The substantive grounded theory of linkage in the AC-PC-CHC chain of care.

### 7.2.1 Study I in relation to study II

At this point we became curious about established concepts of continuity of care and wanted to further study the strategies for linkage in the chain of care in relation to continuity of care. Could strategies for linkage be viewed as struggles to maintain continuity in the AC-PC-CHC chain of care? Another question was how do these strategies affect maternal satisfaction? The model in study I was based to a large extent on professionals' visions of strategies, not on employed strategies. One important reason given for this was that CHC nurses and AC midwives were not working under the same roof and did not meet during the day. This made it interesting to study clinics where they did work under the same roof and where strategies of linkage were more likely to be seen. Thus we chose two different outpatient clinics, one with AC/CHC that had collaborated for a long time (the family centre) and the other with AC/CHC that only recently started to collaborate (the medical centre). In this way we saw an opportunity to further build on the theoretical model of linkage in the chain of care from study I.

### 7.3 STUDY II

This Study aimed to explore strategies for continuity of care for expectant and new mothers and further elaborate on the preliminary substantive grounded theory model of "linkage in the chain of care". The professionals' main concern was to ensure that mothers benefited and experienced support and continuity, which was also consistent with the mothers' expectations.

It turned out that strategies for continuity had been employed for a long time in the family centre whereas, in the medical centre, in spite of visions of continuity, strategies were never implemented.

When implemented, the strategies for continuity were seen as beneficial to professionals, rather than a burden to them. Saving time, meaningfulness, inter-professional learning, and mere pleasure were described as professional benefits.

The two studied outpatient clinics could also be described in terms of chain of care perspective versus a link perspective. Where strategies for continuity were employed, midwives and CHC nurses expressed a *chain of care perspective*. In contrast, when only *visions* of continuity were expressed, several examples of link perspective were reported, such as CHC nurses lacking in knowledge about the competence of the midwives and vice versa. Mothers were aware of the lack of connection between AC and CHC and thought that midwives and CHC nurses worked in isolation. Mothers' experiences of support and continuity from the two outpatient clinics supported the findings from the qualitative analyses of the interviews with AC and CHC professionals. There was a correspondence between the mothers 'satisfactory experiences of continuity of care' and implementation of strategies for continuity of care as reported by the midwives and CHC nurses.

Compared to the preliminary model of linkage in the chain of care, *connection* evolved into the core category of *joint action*. All strategies for continuity (table 5) included joint action by CHC nurses and midwives. CHC nurses and midwives acted together in *joint activities* between CHC nurses and midwives or in *joint support* when CHC nurses and midwives met mothers together. They acted together to provide breastfeeding support, parental education classes, and home visits, and also interacted through informal meetings, knocking on each other's doors, and writing reports together. Professional joint action had the expected effect on mothers in the way that they perceived support and continuity, when joint action through strategies for continuity was implemented.

Table 5. The core process of joint action

Core	Sub cores	Main categories with sub categories	Relation between modes/strategies and practices
	Modes of joint action	Joint activities Joint support	<ul style="list-style-type: none"> <li>Informal and formal meetings, joint policy documents, , introducing new employees</li> <li>Joint home visits, parent education classes, joint breastfeeding support, knocking on the door</li> </ul>
Joint action	Strategies of joint action	Transfer of information <ul style="list-style-type: none"> <li>General</li> <li>specific</li> </ul> Establishing and maintaining a relationship <ul style="list-style-type: none"> <li>Establishing</li> <li>Maintaining</li> </ul> Adjustment <ul style="list-style-type: none"> <li>Joint policy</li> <li>Joint learning</li> </ul>	<ul style="list-style-type: none"> <li>Informal and formal meetings</li> <li>Joint home visits, knocking on the door</li> <li>Parent education classes, knocking on the door</li> <li>Knocking on the door, joint home visits</li> <li>Joint breastfeeding policy, joint policy documents, introducing new employees</li> <li>Informal and formal meetings, joint home visits, parent education classes, breastfeeding support, knocking on the door</li> </ul>
	Practices of joint action	Informal and formal meetings, Joint policy documents Introduction of new employees Joint home visits, Joint parent education classes Joint breastfeeding support Knocking on the door	

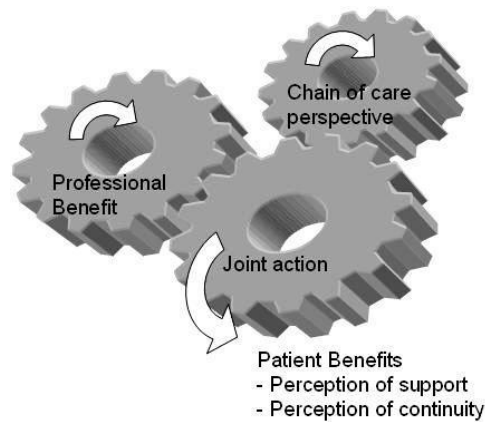
In addition to the preliminary model from study I, a new strategy for continuity of care, *establishing and maintaining a relationship*, emerged. Thus the following strategies promoted continuity and were all conducted as professional joint actions.

*Transfer of information* included transfer of general information about all women and specific information about women in need of special support. Transfer of *general information* occurred during formal and informal meetings. *Transfer of specific information* about mothers was conducted by “knocking on the door” or joint home visits.

*Establishing and maintaining an ante- and postnatal relationship* was conducted by the midwife introducing the CHC nurse to mothers with special needs by “knocking on the door”, and through joint parental education classes; the relationship with the midwife was *maintained* after birth through home visits or breastfeeding support.

*Adjustment* was conducted by writing up *joint policies* on, for example, breastfeeding and by *joint learning* when CHC nurses and AC midwives consulted each other when they needed more knowledge.

The core process of joint action was facilitated by *chain of care perspective* and *professional benefit* but, paradoxically, joint action also seemed to be a prerequisite for the experience of professional benefit and a chain of care perspective. Thus, joint action seems to be the central cog that enables everything else to function effectively. Joint action is an important trigger for professional benefit and a chain of care perspective, but these two factors may not be sufficient to initiate joint action, only to maintain it. (Fig 3).



**Figure 3.** The core category of joint action with facilitators: professional benefit and chain of care perspective

### 7.3.1 Studies I & II relation to study III

Studies I and II indicated that professionals recognized there were mothers lacking support and continuity in the AC-PC-CHC chain of care. Therefore it was of interest to explore the mothers’ perception of professional support and to what extent they turned to clinics outside the established chain of care for support. Were there any relationships

between socio-demographic characteristics, obstetric and neonatal variables, mothers' coping ability and frequency of emergency visits? Could we further elaborate on the theoretical model from study II to deepen our understanding of mothers' experience of support and continuity in the AC-PC-CHC chain of care?

#### **7.4 STUDY III**

The study aimed to examine mothers' perceived satisfaction with professional support and to what extent mothers visited emergency departments during the first two weeks after childbirth. The study also examined if a mother's coping ability (SOC) had any relation to professional support and emergency visits.

More than half the mothers (52.6%) rated the support received as sufficient or more than sufficient, 29.7% as neither sufficient nor insufficient and 17.7% as insufficient or completely insufficient. Mothers who scored low on perceived satisfaction with professional support were those who had caesarean or had a delivery other than normal, gave birth at less than 37 weeks gestation, mothers with high and middle range annual income and finally women with a low and moderate SOC score.

Seventy-six mothers (20.9%) made at least one emergency visit within the first two weeks after childbirth, but as three women made two visits a total of 79 emergency visits were recorded. Seventy-one visits were made due to issues with the delivery, breastfeeding or child health and 63 (17.3%) were made to a hospital emergency department. The most common problems related to delivery were bleeding, infections and pain. Problems related to the child included different types of infections and problems related to breastfeeding, mostly mastitis. Mothers who reported problems unrelated to delivery, breastfeeding or child health, such as having a cold or a headache, did not seek emergency care at hospitals.

A significant association was found between perceived satisfaction with professional support and emergency visits. The odds of visiting an emergency department were approximately twice as high for mothers who had a caesarean delivery or other than normal delivery as for mothers who had a normal delivery. In addition, the odds of making an emergency hospital visit were 2.57 times higher for mothers with a low SOC score than for mothers with a high SOC score.

##### **7.4.1 Study III in relation to study IV**

Study III showed that mothers visited emergency departments to a high extent, and those mothers had less coping abilities and more complicated childbirths. A conclusion was that mothers were lost in the chain of care, not knowing where to turn for help in the established chain of care for new mothers. We wanted to find out where in the chain they were lost? What was the mother's perception and experience of support from the different links in the chain of care (AC, PC and CHC).

#### **7.5 STUDY IV**

Study IV aimed to investigate mothers' perceptions of support and continuity from AC, PC and CHC. There were clear differences in how mothers perceived support from AC, PC, and CHC, respectively, in relation to obstetric data, infant data, and emergency visits the first two weeks after childbirth. In general, support from CHC was perceived as the most satisfactory and support from AC the least satisfactory for most of the variables tested. A lower level of satisfaction with AC was particularly notable for mothers who had undergone a more complicated birth.

Perceived satisfaction within AC, PC and CHC showed in the case of PC that perceived satisfaction was significantly associated with length of maternal stay and frequency of emergency visits. Mothers who had stayed in hospital for two days were less satisfied than women who had stayed for three days. In addition, there was a relationship between dissatisfaction with PC and visiting a hospital emergency department during the first two weeks.

For AC and CHC, perceived satisfaction was significantly associated with the number of weeks of gestation. Having a child at less than 37 weeks of gestation was associated with reduced satisfaction with both AC and CHC, but not with PC.

Thirty-eight percent of the mothers commented on preferred support during the first two weeks after childbirth; the mothers commented most on PC and AC, and made fewer comments about CHC. Mothers made comments on preferred support and comments on preferred continuity.

*Attention to the mothers* was the largest subcategory found in relation to preferred support. They were satisfied with the support given to the child after coming home, but would have liked more support and attention for themselves. They expressed a need for both physical and emotional support and more attention paid to their own needs. Mothers also wanted more *breastfeeding support* from the AC-PC-CHC chain of care.

*Management continuity* was the largest subcategory found in relation to preferred continuity. Mothers reported that an overriding structure was missing during the period immediately after childbirth, which resulted in an unclear role for AC, PC, and CHC. It was not clear where to go for help if needed. A need for health check-ups was expressed. A need for *relational continuity* with the midwife in AC was also clearly expressed. Mothers wanted to be contacted immediately after delivery, and have an early follow-up visit. As many as 35 mothers wrote that they wanted telephone contact with their AC midwife.

## **7.6 THEORETICAL MODEL**

Figure 4 shows a comprehensive theoretical model for linkage in the AC-PC-CHC chain of care based on information from all four studies. The model is explained below.

### **7.6.1 Mothers lost in the chain of care**

Mothers were lost in the AC-PC-CHC chain of care because an overriding structure was missing during the period immediately after childbirth. The unclear roles of AC, PC, and CHC resulted in mothers not knowing where to turn for help in the health care system if problem occurred and therefore turning to emergency departments with a high frequency, especially after a complicated delivery. Mothers viewed support and continuity differently from AC, PC and CHC and particularly wanted support from AC and PC about their own physical and psychological well-being. Mothers with low coping abilities seemed to be more vulnerable and even more lost in the AC-PC-CHC chain of care than mothers with higher coping abilities.

### **7.6.2 Professional visions of linkage**

The professionals were aware of mothers being lost in the AC-PC-CHC chain of care and had a vision for a closer linkage in the chain of care. There was, however, a gap between the vision of linkage expressed by professionals in all links and what actually seemed to be achieved. Despite the fact that midwives as well as CHC nurses had common visions about linkage, collaboration was not achieved because of interacting barriers that had different impacts on the three links in the chain. Barriers to linkage

included lack of professional benefit, where professionals couldn't see that they profited in their daily work by collaboration and a link perspective, where they exclusively focused on their own link.

### **7.6.3 Facilitating factors for professional joint action**

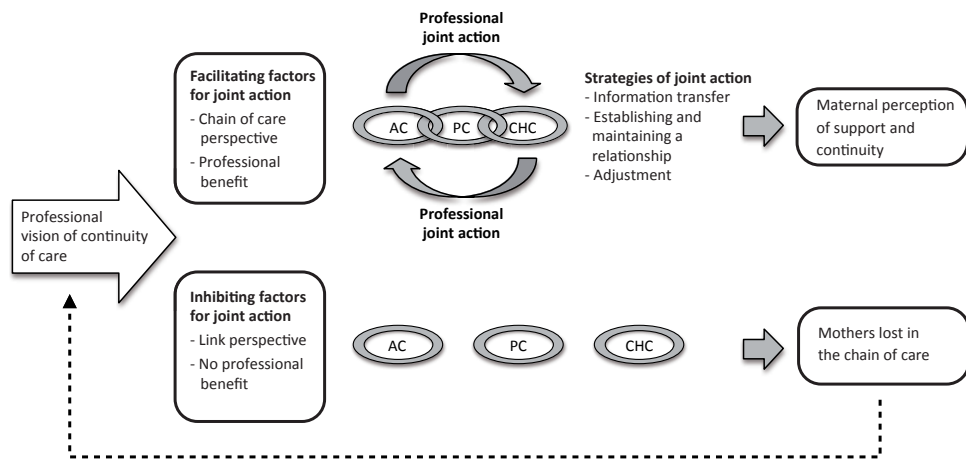
Facilitators for *professional joint action* included a *chain of care perspective*, i.e., the professionals saw the importance of continuity and were knowledgeable about the other links. *Professional benefits*, where professionals saw advantages of linkage in their daily work, also facilitated professional joint action. The professionals saved time, saw the meaningfulness of linkage and profited from learning from each other. A *chain of care perspective* and *professional benefit* thus facilitated professional joint action.

### **7.6.4 Strategies for continuity**

Different strategies for continuity were established when professionals acted together in different joint activities and joint support, namely, *transfer*, *establish and maintain relationship* and *adjustment*. *Transfer* referred to general information shared by the professionals but also specific information about mothers in need of more support. *Establish and maintain a relationship* referred to establishing an ante- and postnatal relationship. *Adjustment* referred to joint policies and joint learning.

### **7.6.5 Maternal perception of support and continuity**

The suggestion from the theoretical model is that “professional joint action” has a positive effect on mothers’ perceived support and leads to an experience of continuity of care, which may lead to mothers not being lost in the AC-PC-CHC chain of care.



**Figure 4.** A theoretical model of linkage in the chain of care for expectant and new mothers by professional joint action



## **8 DISCUSSION**

The results will be discussed with the theoretical model as a point of departure, i.e., reasons why mothers are lost in the chain of care in the postpartum period, reasons why collaborating is not achieved in spite of common visions from professionals, and strategies for continuity. Finally, a discussion of maternal perception of support and continuity in the chain of care will be discussed.

### **8.1 MOTHERS LOST IN THE CHAIN OF CARE**

Mothers were lost in the chain of care, first because they had a need of care, which was not met when they had a complicated delivery or had physical and emotional needs, second because they did not know where to turn for help and third because of a lack of coping ability.

#### **8.1.1 Complicated childbirth**

When mothers had caesarean delivery, or when they had other-than-normal delivery, or had their infant referred to a neonatal clinic and/or gestation time less than 37 weeks, they were in general more dissatisfied with professional support. Thus we can conclude that the more complications the mothers or their newborns had, the less satisfied they were with the support. This finding is supported by Crow et al. [60], who stated that health outcomes and status affect satisfaction; a sicker patient or experience of psychological distress will produce a more dissatisfied patient [60]. This also echoes prior findings in maternity research that more complicated childbirth and infant referred to a neonatal clinic were associated with mothers being dissatisfied with professional support [59, 84, 89]. A more complicated delivery may also lead to posttraumatic symptoms [17, 96, 97]. Study IV showed that mothers with a more complicated delivery wanted support from AC and desired more health check-ups; this is also supported by Weiss & Aber [134], who reported that mothers who experienced caesarean delivery required continuity of care services, especially for their own physical and emotional needs [134]. It is also in line with recommendations from The Swedish National Board of Health and Welfare to provide follow-up and support after a complicated childbirth to avoid fear of childbirth [94].

#### **8.1.2 Having physical and emotional needs**

The findings showed the AC-PC-CHC chain of care didn't succeed with support regarding mothers' physical and emotional well being. Mothers were most satisfied regarding support concerning the child and less satisfied regarding their own needs. Where will mothers have an opportunity to discuss their delivery experiences and get help with physical problems in the early postpartum period? Several mothers wanted immediate help after hospital discharge, especially for their physical needs. Not many studies have a focus on well being after homecoming, albeit physical health problems in mothers are common [3, 114, 115] and are shown to have a negative influence on a mother's emotional well being [115]. Furthermore, vulnerable mothers tend to develop postpartum depression more easily if there is a lack of emotional support, physical health problems or stress [71]. In this thesis, mothers lacked support for their emotional needs and wanted time to talk, which is also empathized in other studies: mothers want availability of professional support to talk about their childbirth experience [86, 135],

because of anxiety around early parenting [45]. The findings showed that mothers had expected more support for their physical and emotional needs, especially from AC and PC; but there were also mothers who lacked support from CHC. One mother stated that it took one month before the CHC nurse asked how she felt. This is in line with Örténstrand et al. [87], who also found that mothers felt neglected by CHC.

### **8.1.3 Do not know where to turn for help**

When 17% of all mothers turn to emergency departments during the first two weeks after discharge, as was shown in this thesis, this indicates that mothers do not know where to turn for support. Mothers made emergency visits due to problems related to delivery, breastfeeding or the infant. No prior study was found about the use of emergency department visits in the early postpartum period in Sweden and there is little information about emergency department use after hospital discharge for mothers internationally. A few studies from the US and Canada have reported only minor reliance on emergency department visits in the post-partum period [109-112]. Our findings indicated mothers who made emergency visits had a more troublesome childbirth and scored significantly lower on satisfaction with professional support as well as on SOC.

Most emergency visits were due to delivery-related problems. There are several possible reasons for this: several mothers complained about physical problems after delivery, which we know are common problems [3, 114, 115]. Mothers who had a caesarean delivery or had not experienced a normal delivery had more frequent emergency department visits than mothers with normal deliveries, which has also been reported in other studies [109, 111]. Clark et al. [109] argued that underlying medical conditions in caesarean deliveries could be reflected in the increase in emergency visits. Clark et al. [109] further argued that many delivery-related problems could be managed in outpatient office settings or could have been prevented by appropriate education before discharge [109], which might suggest that many of the emergency related problems could have been handled by AC and CHC.

Another reason for emergency visits could be a lack of collaboration and too many organisations in the AC-PC-CHC chain of care, which may lead to mothers feeling lost and uncertain of where to turn for help and support with delivery-related problems. Mothers felt confused, not knowing where to turn after hospital discharge. One mother expressed how she had called PC one week after delivery to get help with her perineal problems but PC had told her that it was not their duty any more. In Sweden it is unclear where mothers should turn for help and support beyond the first week after childbirth and who has the responsibility. Mothers may be very vulnerable in the first days after childbirth when discharged from PC, which may be a reason why mothers more dissatisfied with PC made more frequent visits to emergency. Most mothers will not meet their antenatal midwife until the scheduled follow-up visit, usually planned 6–12 weeks postpartum [66], which is well beyond the occurrence of delivery-related health problems [109]. A recent study highlighted the importance of early follow-up care, showing such care could decrease emergency visits [136].

According to this thesis, several mothers sought help for breastfeeding problems such as mastitis in the emergency department; other studies also report mothers seeking emergency help with breastfeeding problems [101, 113]. However, no significant differences were found between women fully, partly or not breastfeeding according to professional support and emergency visits.

Our study found that emergency visits related to the infant were due to the infant having different types of infections, e.g., the common cold. According to Millar et al. [110] most newborns presented at emergency departments were ‘diagnosed’ as healthy

newborns [110]. This is a stressful situation for parents with newborns and one reason for visiting paediatric emergency departments could be that parents still not have had any contact with CHC and don't know where to turn due to insufficient information or contacts.

There was no relationship between socio-demographic background and more frequent emergency visits, which is, in part, in line with other studies [112].

#### **8.1.4 Mothers' sense of coherence**

The interviews with the mothers in study II and the answers from the open-ended questions in the study-specific questionnaire showed that becoming a mother is a stressful event, which is in line with other studies [3, 45, 46, 49, 98]. Mothers who have difficulties in handling this stressful situation might be even more lost in the AC-PC-CHC chain of care than more stress-hardy women and might need more professional support. The results showed mothers with a more troublesome childbirth were more dissatisfied with professional support and these mothers are also the most vulnerable in their transition to the maternal role [52, 98]. The findings showed perceived professional support was closely associated with SOC, consistent with findings of other studies on maternity care, which (by using SOC) identified pregnant women in need of psychosocial support and successfully predicted satisfaction and post-traumatic stress in the postpartum period [15-17]. Mothers who made emergency visits also scored significantly lower on SOC as well as on satisfaction with professional support. This strongly suggests that if the perceived needs of these mothers with an experience of a more troublesome childbirth were adequately met, the number of emergency visits would be reduced and the mothers would be sufficiently satisfied. Professional support is important throughout the AC-PC-CHC chain of care [52], and AC in particular has an important role in preparing expectant mothers in the transitional period [51, 98]. Albeit this is the aim of parent education classes during pregnancy, this preparation is not always achieved or is difficult to prove [137].

## **8.2 VISIONS OF A LINKAGE IN THE CHAIN OF CARE**

In general, professionals in all links felt that mothers were lost in the chain of care, particularly in the postpartum period, and they also understood why mothers were confused and occasionally resorted to emergency department. Since professionals also felt lost, mothers with the same problems were referred to different places and "bounced around". Professionals in all links believed that mothers would profit from greater consensus, achieved by focusing on parenthood and by bridging the gap in the AC-PC-CHC-chain of care. Visions of collaboration, expressed by professionals in this thesis because they saw the advantage for the mothers, were however not enough for collaboration to take place, which is in line with DAMòur [138]. Professionals will not collaborate just because collaboration benefits patients. Therefore, it is unrealistic to think that just bringing professionals together will induce them to collaborate [138, 139]. When interviewing professionals in both studies I and II, the professional benefit of observing different competencies, when, for example, leading a parent education group together, was widely acknowledged. Axelsson & Axelson, [33] also emphasized the importance of seeing each other's different competencies. However, these acknowledgements of professional benefits were still not enough to trigger collaboration.

### 8.3 STRATEGIES FOR CONTINUITY

#### 8.3.1 Collaboration in the chain of care

The result of this thesis, that linkage in the chain of care for expectant and new mothers is not easily managed, is not surprising in light of the literature on collaboration between organizations. Professional collaboration across organizations is complicated [32] and can be a painful and resource consuming process [35]. According to Huxham [36], collaboration is such a complex and ambiguous process, that if there is not a clear advantage to collaboration it's better to avoid it. To get the advantages of collaboration means that collaboration should achieve an output that could not be provided by acting alone in an organization [36].

Collaboration is a fragile process, as it's difficult to build mutual understanding, common aims and manage different power structures when organizations are complex, dynamic and ambiguous [35, 36]. However, several factors well known to characterize effective work groups were prevalent in the family centre in study II, where strategies for continuity were implemented: being a small group, having everyday contact, working for a common goal, good group atmosphere and enjoying each other's company [138, 140] and trusting each other [35, 138, 141, 142]. In the family centre in study II the professionals 'had a typical horizontal integration' and established "professional joint actions" that seemed to be the trigger for more professional joint actions, for more recognition of professional benefit and for a more developed chain of care perspective. Professional joint action was the central "cog" that enabled everything else to function effectively. The paradoxical result of this study is that although professional benefit seems to be necessary for collaboration, this benefit is not experienced until collaboration has started, which has also been stressed by Huxham [36].

#### 8.3.2 Continuity in the AC-PC-CHC chain of care

To my knowledge, this is the first study of support and continuity in the AC-PC-CHC chain of care in Sweden. This thesis had a focus on the nearest time after childbirth as it involves all three links. WHO emphasizes the importance of continuity by linking reproductive health and child health service [3], but the AC-PC-CHC chain of care does not seem to be connected and coherent.

#### 8.3.3 Strategies for continuity

The three strategies for continuity: transfer, establishing and maintaining a relationship, and adjustment, correspond to established concepts of continuity of care, namely, informational, relational, and management continuity [10] (Table 6) and will be discussed in relation to the context of the AC-PC-CHC chain of care.

**Table 6.** Strategies for continuity compared to types of continuity by Haggerty et al. [10]

Strategies for continuity – joint action	Type of continuity
Transfer	Informational continuity
Establish and maintain relationship	Relational continuity
Adjustments	Management continuity

### *8.3.3.1 Transfer/Informational continuity*

The nursing literature emphasizes communication and informational transfer to maintain a consistent approach [10]. All links expressed a need to collaborate concerning mothers who need special support in the AC-PC-CHC chain of care. A clear patient benefit was also seen by identifying mothers during pregnancy who require special support after childbirth, stressed before in many studies [16-19]. However, the results showed that the “link perspective” was a barrier. It has been argued that when mothers are vulnerable, pathways of communication and purposeful face-to-face contact are of prime importance [15, 142]. One obstacle to the transfer of information might be concern about the mothers’ confidentiality. This obstacle could be overcome by involving the mother herself in the interaction. In the family centre in study II, during joint home visits, midwives, who knew the mother well, did transfer information to a CHC nurse without compromising the mother’s confidentiality. It is difficult to know the most effective strategy for transition of information, but if a mother needs special support it should be of high priority during pregnancy to contact CHC with the mother’s consent.

### *8.3.3.2 Establishing and maintaining relationships/relational continuity*

The factor having the greatest impact on satisfaction is the practitioner-patient relationship [20, 60] and that might be a reason why study IV showed that relational continuity had an impact, especially on AC. Mothers lost contact with the midwife they had throughout pregnancy and missed the relation with “their” midwife. Mothers expressed a need to have an immediate contact after homecoming and several mothers wanted help with physical problems related to delivery. Mothers with a more troublesome childbirth seemed to suffer most because of lack of contact with AC, which may imply that mothers were “cut off” too early from the relation to the midwife in AC. Surprisingly, many mothers expressed that “little” would have been enough, such as a telephone call, which has also been emphasized by others [46, 62]. One study showed that the earlier the contact (telephone contact, home visit) mothers had with health professionals after the discharge from hospital the more satisfied they were. The timing of postpartum follow up was considered more important than type of support [107].

### *8.3.3.3 Adjustment/Management continuity*

When there is no management continuity, both professionals and mothers will be lost in the AC-PC-CHC chain of care. Professionals refer mothers to each other and mothers don’t know where to turn if problems occur. Mothers also made more emergency visits when dissatisfied with PC. Recommendations that have been given previously for management continuity in maternity care include a shared philosophy and framework [142], shared plans and protocols [93], for example, with respect to breastfeeding [28] and a care coordinator who has an overall picture of a mother’s needs [15, 22, 139]. The AC-PC-CHC chain of care in Sweden has many different organizations and management has made written recommendations for collaboration in the AC-PC-CHC chain of care for both midwives and CHC nurses. However, this thesis shows that professionals perceive a lack of such structure, which was also obvious in an earlier

Swedish survey [78]. Waldenström & Rudman [61] suggest that to improve satisfaction with maternity care there is a need to define the aim and decide what kind of postpartum support should be available. Further, as emphasized by Huxham [36], it's better to start with a realistic aim which is likely to produce a positive outcome, as that would render more ambitious collaboration palatable [36].

Mothers were more dissatisfied with professional support in PC if they had a short hospital stay. Again, if management had agreed on a more flexible stay for mothers they might have become more satisfied. Studies show that a short hospital stay may lead to mothers' dissatisfaction [4, 59, 84, 85]. According to WHO, the quality of care is not dependent on the duration of the postpartum stay in hospital; if adequate care is provided at home it may sometimes be even better. However, this is problematic since, especially in Sweden, there seems to be a lack of midwifery follow-up support [84]. By extending postpartum support after homecoming, perhaps Swedish mothers will become more satisfied with care given in PC even with a short hospital stay.

### **8.3.4 Collaboration and continuity**

Study I showed that professionals had clear visions on collaboration because they recognized the gain to patients, but being aware of the advantages in patient gain was not enough for collaboration to take place. Having a link perspective was a barrier to collaboration, but other factors, such as lack of management support and working in different workplaces with different management, were also important factors for not collaborating. Study II showed that when professionals were involved in joint actions they had "a chain of care perspective" and experienced a professional benefit. Professional joint action was described as leading to informational, relational and management continuity of care for mothers. However, this thesis shows that linkage in the AC-PC-CHC chain of care is complex and the analyses give no clear answer to the question of *how* collaboration starts, but only indicate that professional joint action leads to greater professional benefit and a better perspective on the whole chain of care, which in turn leads to more professional joint action. Huxham [32, 35-37] gave some recommendations on how to start collaboration: before starting, the professionals must have some trust in each other. Having common expectations about the future relationship and establishing "starting aims" is one way to. However, one could also argue that trust is something that emerges when professionals start to collaborate. Thus it might be better to just initiate professional joint action even if aims are not fully agreed on and expect that trust will grow in the process, like professional benefit and knowledge of other professionals' competence. A collaborative process is never final but has to be constantly nurtured [32, 35-37].

## **8.4 MOTHERS PERCEPTIONS OF SUPPORT AND CONTINUITY**

This thesis shows that support and continuity are important throughout the AC-PC-CHC chain of care but this issue has been poorly researched and there is a need for further development and research [29, 73]. As many as 38 % of the mothers in study IV had some suggestions for more support in the AC-PC-CHC chain of care. Mothers' suggestions for support were mostly related to more attention being paid to them, in line with previous research that attention to the mothers is essential. Mothers expressed a great need to talk about their experience after childbirth, which has also been stressed in other studies [86, 143]. Mothers wanted professionals to be respectful, non-judgmental, friendly and supportive [85, 144] and they wanted to be treated as individuals [86, 144]. Mothers who received good support for themselves and check-ups and medical care for the infant were more satisfied with both the emotional and

medical care in the postpartum ward [90]. Mothers' perceptions of breastfeeding support from AC, PC and CHC did not differ. Mothers wanted more breastfeeding support from the entire chain of care. Studies have emphasized the importance of professionals being well trained in breastfeeding support throughout the whole AC-PC-CHC chain of care [27, 28]. Accessibility to breastfeeding support was described in this thesis as being accomplished by early home visits and a telephone hotline, a method also suggested by Nyqvist & Kylberg [42]. When mothers received breastfeeding support and encouragement they also acquired better self-confidence [28]. From this thesis it is known that mothers wanted health check-ups and early telephone contacts with the midwife already known to the mother. Further, they wanted more consistency in information they received on where to turn for help. Study II showed that there was a correspondence between mothers' satisfactory experiences of continuity of care and implementation of strategies for continuity of care as reported by the midwives and CHC nurses. When strategies for continuity were applied as joint actions among professionals, this had an effect on the mothers' perceived support and continuity. This thesis suggests that there is a relation between mothers' experience of support and their experience of continuity that may be interpreted in the following way: experience of continuity of care leads to a perception of good support.

## **8.5 METHODOLOGICAL CONSIDERATIONS**

One of the strengths of this thesis is the use of mixed methods, making it possible to answer different types of research questions. The combination of quantitative and qualitative methods provided different sets of knowledge and a richer description and understanding of the AC-PC-CHC chain of care. The findings showed that the quantitative and qualitative analyses were consistent by the way in which the results from the qualitative analysis supported the results from the quantitative analysis and vice versa. Measures of validity and reliability or trustworthiness and rigour differ between quantitative and qualitative research [130]. First, the quantitative studies will be discussed, then the qualitative studies.

The *validity* of the quantitative studies (article III and IV) has some limitations. The mothers' experiences with professional support, emergency visits within two weeks after childbirth and their SOC were only documented at one point about 4–6 weeks after childbirth. It might be possible that the mothers' responses reflected longer periods than the two weeks after childbirth. The majority of respondents were first-time mothers, which could be a bias, as they generally need more support.

Given that a self-constructed questionnaire was used, some limitations follow naturally. But no other questionnaire was available to measure support from the entire chain of care for expectant and new mothers for the time period focused on in this study. Measures were taken to pilot test the questionnaire in two steps and Cronbach's alpha was reasonably high. The most severe limitation is that mothers typically do not meet AC during the time period focused on, which is why results concerning mothers' experience of support and continuity from AC must be interpreted with caution. This is to some extent balanced by the fact that the qualitative analyses support the results from the questionnaire. Also in study III, the parallel use of a study-specific questionnaire and SOC made it possible to show that associations between perceived satisfaction with professional support and different factors did not merely depend on SOC.

Another weakness is that caesarean section was not stratified into elective and emergency caesarean section, which might have given more specific information. Additionally, more detailed descriptions of mode of delivery in place of "other than

normal” may have been more appropriate. Presumably, the response “a delivery other-than-normal” included instrumental delivery but it could also have been a normal delivery reflecting some sort of posttraumatic stress.

Validity is a central issue in qualitative research but is more generally known as credibility [130]. The credibility of the qualitative studies (study I and II) has some limitations. At first the authors’ preconceptions and experience could have influenced data collection and data analysis in a non-intended way. Collection of data for study I was guided by the authors’ own experience of a lack of collaboration in the AC-PC-CHC chain of care. According to Granheim & Lundman [145], the fact that the data was gathered in an environment known to the author could also have an impact on the answers the participants gave in the interviews and in the subsequent analysis. It is, however, impossible for a researcher not to add his/her own subjective perspective to the phenomena under study, but it is important not to put a meaning to something that is not there [145]. In this pursuit, co-authors from other disciplines and frequent discussions of my results in academic seminars have been balancing factors. The opposite side of this is that relevant competence and a solid understanding of the subject is strength, particularly as a moderator in Focus Groups. Rigour was also guaranteed by having the same moderator for all focus groups and individual interviews.

Use of focus groups may include a risk of participants not saying what they truly believe because of pressure from other participants in the group. This risk was balanced by having both homogenous and heterogeneous groups with regard to professional specialty. Also, the interviewees came from several different AC and CHC clinics, which meant that they did not have prior relations that could enhance social pressure. Another limitation in the focus group study was that there were few midwives from postpartum care. This limitation was somewhat balanced by the fact that most midwives working in antenatal care have worked in postpartum care or both.

One important limitation in study II was the differences between the family centre and medical centre in terms of socioeconomic factors, group size and time spent in the same premise, as these are all factors that may account for prevalence of collaboration and also directly influence mothers’ experience of support. The strength of that study was that data was collected from several sources, documents, observations and interviews with both mothers and professionals.

Like all GTM studies, however, the results from studies I and II are only a set of assumptions, although thoroughly grounded in data. According to Glaser [118], a theory must have fit, relevance and it must work and be readily modifiable. In study I this was examined through interviews with six midwives and CHC nurses to whom the model was presented. They confirmed that the results rang true and that the theory was meaningful, coherent, and applicable in practice. Further, a grounded theory has explanatory value only for the area in which it emerged: in this case, the AC-PC-CHC chain of care in a suburb of a large Swedish city. But the theory is amenable to application and testing in similar areas. It can be modified and applied in a wider field through continued grounding in new data. Certainly, one can speculate that the findings may be relevant to many other chains of care in explaining collaboration and continuity.

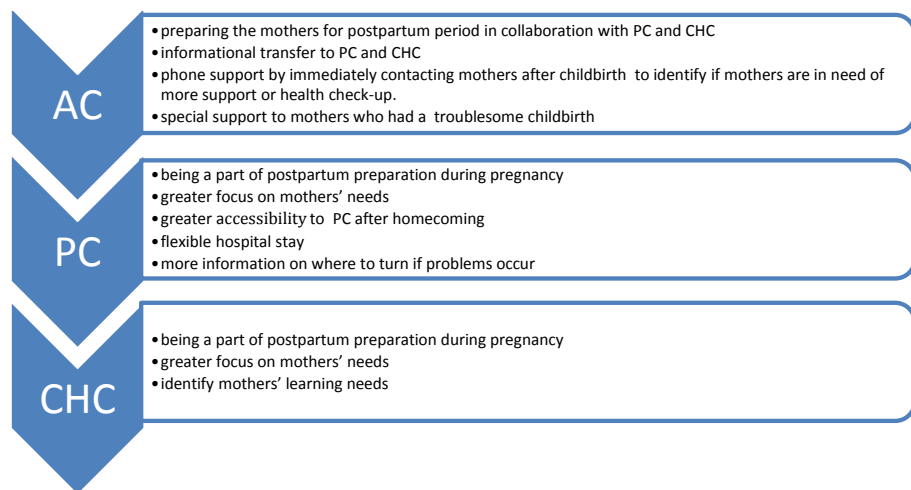
This thesis was also strengthened by interviewing mothers not having Swedish as their native language and thereby creating a source of greater variation in the data. At one of the outpatient clinics in study II, the majority of the mothers were born in other countries and interpreters facilitated three of the interviews. As much as this is a strength, it may also constitute a limitation because of difficulties in interpreting



responses and undue influences from interpreters. Furthermore, the responses from the questionnaires confirmed a high number of mothers from countries other than Sweden.

## 9 CLINICAL IMPLICATIONS

More support from AC and PC care for all mothers in the first two weeks after childbirth and particularly to those with troublesome childbirth would serve a two-fold purpose: more satisfied mothers and less pressure on emergency departments. Early in the postpartum period, professionals need to identify how mothers experience childbirth and further identify mothers with more severe postpartum blues as this may predict postpartum depression. Professionals need to further identify mothers with physical and emotional needs but also respect mothers who do not want or need more support. It's also necessary to achieve more accessibility for health check-up and breastfeeding support after homecoming. Collaboration seems to be an important task for the development of better continuity in the AC-PC-CHC chain of care. This study makes some suggestions on practical implementations for AC, PC and CHC for better postpartum continuity and support (Figure 5).



**Figure 5.** Suggestions for practical implementations in the chain of care for expectant and new mothers

### 9.1 ANTENATAL CARE

It is not surprising that mothers ranked AC lowest on support in the postpartum period, as this is the first link in the chain and they had already passed through PC to CHC after childbirth; nevertheless mothers expressed they wanted more contact with AC after childbirth. In particular, mothers with physical problems and complicated deliveries expressed a need for more support. It is important to find ways to improve relational continuity after hospital discharge for this group. The AC midwife is the person who knows the mother best and may provide valuable support in the early postpartum period, especially with physical problems after delivery. To increase management and relational continuity, antenatal midwives, who have the best overall understanding of mothers' needs, could act as coordinators of care during the first weeks after childbirth and identify mothers who are in need of more support. Midwives should be given resources to be able to make immediate contact with the mother after childbirth to identify her needs. A planned visit within 1–2 weeks after childbirth would provide

better support than six to twelve weeks postpartum. It is a challenge for AC midwives in the parenthood education classes to prepare the family for the first weeks after childbirth. Furthermore, mothers may need a more individualised plan and to be a part of decision-making regarding the specific kind of postpartum support she needs. AC also needs to transfer information to CHC if they have identified a mother who requires special support; in this way a mother will establish a relationship with her CHC nurse before childbirth.

## **9.2 POSTPARTUM CARE**

It is a difficult task for midwives in PC to support and teach families about care of the newborn and the mother during such a short hospital stay, when mothers are tired and overwhelmed. This thesis argues the mothers have different needs and need to be treated individually, and that the length of hospital stay should be more flexible. When the postpartum stay is only 1–2 days it's important that mothers still have accessibility to postpartum care with good telephone support. Additionally, there is a need for better information on where to turn if problems occur, and provision of such information will reduce the number of unnecessary emergency visits.

## **9.3 CHILD HEALTH CARE**

One way to strengthen the relational continuity could be CHC nurses taking part in parent education programs during pregnancy. Mothers also wanted more support and attention for their own needs from the CHC nurse, but it is important to treat mothers individually, as new mothers have different learning needs. The CHC nurse will have intensive contact with the family in the first months after childbirth and is therefore the key person who could see signs of mothers with more severe mood disturbances or in need of more breastfeeding support.

## 10 CONCLUSIONS

Continuity of care during the first two weeks in the postpartum period needs to be improved in Sweden as there is a gap between the links in the AC-PC-CHC chain of care the nearest time after childbirth. Mothers are lost in chain of care and turn to hospital emergency departments with delivery related problems.

Special attention must be paid to mothers with complicated delivery and those with low coping ability as they are more likely both to experience insufficient support and to present to emergency departments.

All three links in the chain of care, AC, PC, and CHC are important to guarantee mothers' experience of support and continuity during the early postpartum period. Mothers appreciate support differently from the three links, but want more attention for their own physical and emotional needs from *all* three links.

Mothers recognize and appreciate joint action between CHC nurses and midwives from different links in the chain of care. Professional joint action promotes continuity of care but is hampered when professionals have a "link perspective" and experience no professional benefit from such collaboration. The three distinct strategies for professional joint action, which are outlined in this thesis, promote a chain of care perspective and experience of professional benefit, which, in turn, may facilitate more joint action and lead to benefit for mothers.

## 11 FUTURE PERSPECTIVES

Cutbacks in postpartum care may have enhanced the need for structure and guidelines for providing support to new parents. Many questions are raised by this thesis:

- How can AC and CHC collaborate when they do not share the same management and location?
- How can postpartum follow-up visits be structured to give mothers satisfactory support and reduce the number of postpartum emergency visits?
- Do family centres provide better support and continuity for mothers?
- Is SOC a valuable instrument to identify mothers who are more vulnerable?
- Who supports mothers suffering from a traumatic reaction caused by their delivery?
- What is the perspective of support and continuity from fathers in the chain of care?

## 12 SUMMARY IN SWEDISH/SAMMANFATTNING PÅ SVENSKA

### BAKGRUND

Vårdkedjan: Mödravård (MVC), Förlossning/eftervårdsverksamhet (BB) och Barnhälsovård (BVC) är alla betydelsefulla länkar för blivande och nyblivna mödrar. När vårdtiderna sjunker på BB, ställs högre krav på stöd och kontinuitet inom vårdkedjan.

### MÅLSÄTTNING

Den övergripande målsättningen med denna avhandling var att undersöka barnmorskor/barnsjuksköterskors och mödrars upplevelse av stöd och kontinuitet i vårdkedjan.

### MATERIAL OCH METOD

Avhandlingen består av fyra delstudier: två kvalitativa studier (I-II) och två kvantitativa studier (III-IV). I både studie I och II användes Grundad Teori. I studie I intervjuades 32 barnmorskor och barnsjuksköterskor i fem fokusgruppsintervjuer och två individuella intervjuer. I studie II insamlades data genom fältstudier (dokument, deltagande observation samt intervju med personal och nyblivna mödrar). Totalt intervjuades 20 barnmorskor och barnsjuksköterskor och 21 mödrar. Studie III och IV är baserad på samma kohort av mödrar, en tvärsnittsstudie med en enkät som fokuserat på mödrars nöjdhet av stöd från MVC, BB och BVC de närmaste två veckorna efter förlossningen (n=546). I studie III användes deskriptiv statistik och logistisk regression som analys. I studie IV användes ”mixed method design” med logistisk regression och innehållsanalys.

### RESULTAT

I studie I är resultatet en grundad teori om samverkan (*sammanlänkning*) i vårdkedjan - MVC-BB-BVC. Mödrar var vilsna i vårdkedjan och visste inte vart de skulle vända sig, vilket barnmorskor och barnsjuksköterskor förstod och därför hade en vision om sammanlänkning genom utökat samarbete. Sammanlänkning förutsatte att barnmorskor och barnsjuksköterskor utvecklade ett *vårdkedjeperspektiv* där de hade överblick och kännedom om hela vårdkedjan, i motsats till ett *länkperspektiv* med ensidigt fokus på den egna arbetsplatsen. Perspektiven varierade och var bl.a. beroende av position i vårdkedjan. BVC som sista länk i kedjan hade andra och större behov av samverkan än BB som den mittersta länken och MVC som den första länken i vårdkedjan. BVC hade därigenom lättare att utveckla ett *vårdkedjeperspektiv*. Alla uttryckte emellertid en vision om samverkan, men för att känna engagemang för genomförande krävdes dessutom att personalen upplevde en vinst i det dagliga arbetet av ökad samverkan.

I Studie II identifierades tre strategier för kontinuitet för att uppnå sammanlänkningen: överföring, upprättande och behållande av en relation samt anpassning. Dessa tre strategier utgjorde basen för kärnkategorin: ”gemensamma handlingar” mellan barnsjuksköterskor och barnmorskor från olika länkar av vårdkedjan. Alla tre strategier innebar att barnmorskor och barnsjuksköterskor arbetade tillsammans (vid samma tid, i samma rum och med en gemensam patient eller gemensam uppgift).

Mödrar upplevde kontinuitet när personalen arbetade tillsammans enligt dessa strategier.

Studie III fokuserade på mödrars upplevelse av det professionella stödet under de två veckorna närmast efter förlossningen. Det visade sig att 53 % av mödrarna var nöjda eller mycket nöjda, 29,7% varken nöjda eller missnöjda och 17,7% missnöjda eller mycket missnöjda. Sjuttio procent av mödrarna besökte någon form av akutmottagning de två närmaste veckorna efter förlossningen, med problem relaterade till förlossningen. Mödrar som gjort akuta besök inom sjukvård var mindre nöjda med det professionella stödet, hade lägre "känsla av sammanhang" samt hade mer komplicerade förlossningar.

Studie IV visade att det fanns en stor skillnad i hur mödrar upplevde stödet från MVC, BB och BVC. Mödrar var mest nöjda med stödet från BVC men saknade uppföljning från MVC och BB. Nästan 40 % av mödrarna hade önskat mer stöd de närmaste två veckorna efter förlossningen. De saknade kontinuitet i vårdkedjan och hade önskat mer stöd för fysiska och emotionella behov. Om barnet föddes före graviditets vecka 37 var mödrarna mer missnöjda med stödet från både MVC och BVC men inte med stöd från BB. Mödrar som gjort akuta besök i sjukvården under de två första veckorna efter förlossningen var också mer missnöjda med stödet från BB.

#### SLUTSATSER

Alla länkar i vårdkedjan är viktiga för att ge stöd till mödrar de två första veckorna efter förlossningen ändå visar avhandlingen att det är en brist i kontinuitet framförallt i tiden närmast efter förlossningen. Sammanlänkning i vårdkedjan måste förbättras för att höja kvaliteten i vården för nyblivna mödrar.

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