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Home care after early discharge: Impact on healthy mothers and newborns

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ABSTRACT

Objective: to compare early discharge with home care versus standard postpartum care in terms of mothers' sense of security; contact between mother, newborn and partner; emotions towards breast feeding; and breast-feeding duration at one and three months after birth.
Design: retrospective case-control study.
Setting: a labour ward unit in Stockholm, Sweden handling both normal and complicated births.
Participants: 96 women with single, uncomplicated pregnancies and births, and their healthy newborns.
Intervention: early discharge at 12–24 hours post partum with 2–3 home visits during the first week after birth. The intervention group consisted of women who had a normal vaginal birth ($n=45$). This group was compared with healthy controls who received standard postnatal care at the hospital ($n=51$).
Instruments: mothers' sense of security was measured using the Parents' Postnatal Sense of Security Scale. Contact between mother, child and father, and emotions towards breast feeding were measured using the Alliance Scale, and breast-feeding rates at one and three months post partum were recorded.
Findings: women in the intervention group reported a greater sense of security in the first postnatal week but had more negative emotions towards breast feeding compared with the control group. At three months post partum, 74% of the newborns in the intervention group were fully breast fed versus 93% in the control group ($p=0.021$). Contact between the mother, newborn and partner did not differ between the groups.
Conclusion: early discharge with home care is a feasible option for healthy women and newborns, but randomised controlled studies are needed to investigate the effects of home care on breast-feeding rates.

Introduction

Postpartum care in high-income countries has undergone radical changes in the past 30 years; the normal length of stay (LOS) in Sweden, Australia, the USA, Canada and the UK after an uncomplicated vaginal birth is now 48 hours or less (Brown et al., 2009). Early discharge is a concept that varies markedly between different models of postpartum care; an early discharge in one setting can be a normal LOS in another. The level of primary care support or co-interventions after early discharge also varies considerably between countries and hospitals, but its effect on both maternal and neonatal outcomes has not been studied sufficiently (Brown et al., 2009).

The effect of early discharge is often measured by re-admission rates in relation to LOS (Waldenström, 2007; Brown et al., 2009). Due to differences in interventions and different interpretations of early discharge, the results of these studies can be difficult to apply in clinical practice. The importance of different routines in home care can be perceived when comparing care options in different countries: in the UK, most women receive approximately seven home visits by a midwife during the first two weeks post partum as routine care. This might explain why there has been much less concern about the medical safety of early discharge in the UK compared with the USA and other countries where access to primary care post partum is limited (Brown et al., 2009).

Postpartum care has to be medically safe and meet the family's need for togetherness and bonding (Ellberg et al., 2006). Data

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concerning the safety of early discharge of mothers and newborns is conflicting. In Sweden, according to Waldenström (2007), there are insufficient data supporting claims of increased medical complications or re-admissions with shortened LOS. In a Cochrane review by Brown et al. (2009), early postnatal discharge of healthy newborns and mothers showed no adverse effects on breast feeding or increases in the rate of maternal depression. In contrast to these results, a Swedish study by Ellberg et al. (2008) found that newborns with early neonatal examination (6–48 hours of age) and home care had higher re-admission rates than newborns cared for at the hospital and examined at 49–72 hours of age. It has been reported that exposure to nosocomial infections is reduced when the mother and newborn are discharged early, and care is provided by a limited number of health-care professionals (Brown et al., 2009; Sigurdardottir, 2010).

In Uppsala, Sweden, postpartum homecare programmes have been in place for 20 years. In a recent study from Uppsala by Johansson et al. (2010), 21 first-time mothers and their partners were asked how they had experienced early discharge with home care. The participants rated their involvement in the decision-making process regarding options for postpartum care as high, and the response was overwhelmingly positive. This study recommended early discharge with home care for healthy newborns and mothers, enabling health-care workers to focus on more complicated cases in hospital (Johansson et al., 2010).

There is a well-established early discharge/homecare programme in Reykjavik, Iceland. The programme includes up to eight home visits by a midwife during the first 10 days post partum. The service was established in 1993, and at that time, 2.5% of all women who gave birth at Landspitalinn Hospital in Reykjavik participated in the programme (Sigurdardottir, 2004). In 2010, 80% of all women who gave birth at the hospital participated in the programme (Sigurdardottir, 2010). The success of the homecare programme has been highly dependent on early introduction to the programme during pregnancy, 'word of mouth', positive remarks from mothers, and a sense of normalisation in society. Postnatal care in Iceland is now based on early discharge after normal birth, and even mothers who have planned caesarean sections receive home care post partum (Sigurdardottir, 2010).

A common issue in all discussions about early discharge is a recommendation of an active and early follow-up programme, identification of newborns and mothers with risk factors, a well-implemented information template (both oral and written) for the parents before discharge, and easy access to care providers if problems arise (Ellberg et al., 2006; Brown et al., 2009; Johansson et al., 2010; Sigurdardottir, 2010).

The percentage of mothers who breast feed their infants has decreased in Sweden. This trend has been ongoing since 2004, and the number of women who exclusively breast feed during the first week post partum has also been declining (Official Statistics of Sweden, Statistics Health and Medical Care, 2011a). This decrease has not been explained and the role of postpartum care is unknown.

In Sweden, women tend to be more dissatisfied with postpartum care (26%) than intrapartum care (10%). Negative experiences, lack of continuity and a sense of stress are often reported. The hospital stay is often perceived as too short and the emotional aspect of care as dissatisfying. Women have reported that insufficient time is spent on encouragement, answering personal questions and breast-feeding support (Waldenström et al., 2006). Homecare visits may be one of the best ways to give individualised care, and this model of care has been shown to increase maternal satisfaction and to be less costly than hospital-based care (Escobar et al., 2001).

Postpartum care varies in different parts of Sweden. The three most common postpartum care options in Sweden are a traditional postpartum care unit, a family suite with less well-staffed accommodation, and early discharge with some form of follow-up programme. In 2009, 72% of all mothers in Sweden left the hospital within two days of birth (Official Statistics of Sweden, Statistics Health and Medical Care, 2011a). However, early discharge with home care is not an option in Stockholm today.

The aim of this study was to compare early discharge with home care versus standard postpartum care in terms of mothers' sense of security; contact between mother, newborn and partner; emotions towards breast feeding; and breast-feeding duration at one and three months post partum.

Methods

Intervention group

Women who gave birth in August and in the first week of November 2011 who had a normal birth were invited to participate in the study, and were offered postnatal care in their homes. The intervention consisted of discharge 12 hours post partum for multiparas and 24 hours post partum for primiparas. The newborns were examined by a paediatrician before discharge. Home visits were performed by two nurse–midwives two to three times during the first week post partum. The nurse–midwives involved in the project were experienced in neonatal care. Jaundice and weight controls, breast-feeding coaching and follow-up, and routine newborn blood screening were performed during those visits. The parents could contact the homecare providers at will during working hours, and could contact the postpartum unit out-of-hours. The new model of care was concluded with a follow-up visit at the hospital 5–7 days post partum, including an examination of the newborn by a paediatrician, an auditory screening and a discharge meeting with the homecare provider.

Control group

In order to avoid selection bias, the intervention group was compared with healthy controls who gave birth in July 2011 when the homecare project had not yet started. All mothers in the control group received standard postnatal care at the hospital. The standard postpartum care includes a 24-hour postpartum stay for healthy multiparas and a 48-hour postpartum stay for healthy primiparas. The care is delivered in the childbirth suite, the postpartum unit, or in a family suite with less well-staffed accommodation. A paediatrician examines the newborn before discharge. If the newborn is examined before 24 hours of age, the procedure is repeated at 2–5 days of age in connection with auditory screening and routine blood testing of the newborn. The parents can telephone Call the postpartum unit for advice until the infant is seven days old.

Setting

The clinic where this study was conducted is situated in northern Stockholm, Sweden. The labour ward handles approximately 3700 births per year.

Procedure

The study was introduced to the birth clinic staff on two separate occasions in the spring of 2011. All midwives working at the clinic were involved in recruiting mothers for the study. During the study period, there were 396 births at the clinic, 150 (39%) of which met the inclusion criteria for the study (Fig. 1, Table 1).