Research Update

Current Studies on Two Separate Topics: Breastfeeding Postpartum Length of Hospital Stay

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Abstract

In this column, the author examines recent research on two separate topics: 1) breastfeeding; 2) postpartum length of hospital stay. Recent studies suggest long-term effects of breastfeeding that benefit both mother and infant. Benefits include a reduced risk of breast cancer in breastfeeding mothers and a reduced level of total and LDL cholesterol in adults who were breastfed as infants. Infants of mothers with maternal asthma had lower rates of asthma if the mother breastfed. In a study of women in the United States who planned to breastfeed, those mothers who breastfed exclusively and planned to breastfeed more than three months were more likely to achieve their goals than mothers who planned to combine breast and human-milk substitute feeds and to breastfeed less than three months.

In a Canadian study, shortened postpartum stays led to increased re-admission to hospital for mothers with cesarean births. In contrast, in a Massachusetts study, shortened postpartum stays did not lead to an increase in infant visits for urgent care. However, the Massachusetts study did not reflect a decrease in maternity-related costs associated with shortened length of postpartum stay.

Journal of Perinatal Education, 12(2), 44–46; breastfeeding benefits, postpartum length of hospital stay.

Breastfeeding Benefits

When we teach about the benefits of breastfeeding in childbirth education classes or during other prenatal contacts, many educators concentrate on the immediate benefits for mothers and infants. Some recent research has added to our knowledge of long-term benefits, as well.

The first is a large epidemiological study by a group in the United Kingdom, the Collaborative Group on Hormonal Factors in Breast Cancer (2002). This group analyzed data from 47 studies in 30 countries throughout Europe, Asia, North America, Latin America, and developing nations studied by the World Health Organization. Together, these studies included 50,302 women. When the data from these studies were combined and analyzed, researchers found that women who did not have breast cancer had slightly more births (2.6 per woman vs. 2.2 per woman). Additionally, this same group of noncancerous women were more likely to have breastfed (79% vs. 71%), and they had a lifetime duration of breastfeeding that was longer (15.6 months vs. 9.8 months). The relative risk of breast cancer was decreased by 4.3% for every 12 months of breastfeeding and decreased by 7% for each birth. Both of these differences were statistically significant. The authors commented, "The major reason for the high incidence rates of breast cancer in developed countries are the small family size and the short duration of breastfeeding . . ." (Collaborative Group on Hormonal Factors in Breastfeeding, 2002, p. 194). The authors also noted that the average family size and duration of breastfeeding in Asian and African countries are declining rapidly, and the incidence of breast cancer, formerly at 1%–2%, is rising. While increasing the number of births per woman in either developed or developing countries is unlikely, encouraging a prolonged period of breastfeeding is feasible. The authors of this study suggested that increasing the period of breastfeeding by 6 months could reduce the incidence of breast cancer by 5%, and increasing the duration of breastfeeding by 12 months could reduce the incidence by 11%.

Another study (Owen, Whincup, Odoki, Gilg, & Cook, 2002)—part of the School Heart Health Study—examined childhood cardiovascular risk factors in 10 British towns. The researchers conducted a systematic review of all studies reporting cholesterol levels in breastfed and bottle-fed infants of all ages. They found

that, while both total cholesterol levels and levels of low-density lipoprotein cholesterol were higher in infancy among breastfeeding infants, cholesterol levels of adults who were breastfed were lower—a finding that was statistically significant. These outcomes suggest a possible protective effect of breastfeeding against cardiovascular disease. They also emphasize the importance of longitudinal studies.

A study from Australia (Oddy, Peat, & de Klerk, 2002) examined the relationship between maternal asthma, breastfeeding, and childhood asthma. Previously, controversial views addressed the question of whether or not asthmatic mothers should breastfeed (Wright, Holberg, Taussig, & Martinez, 2001). In the current study of 2,979 children living in western Australia, breastfeeding was associated with lower rates of asthma among infants of asthmatic mothers. The protection breastfeeding provides against infection is thought to be one mechanism. The authors noted, "Given our findings, we continue to recommend that infants with or without a maternal history of asthma be exclusively breastfed for 4 months and beyond" (Oddy et al., 2002, p. 67).

The data from the studies described here add to the knowledge of the importance of breastfeeding, and the duration of breastfeeding, for both mothers and infants. However, according to the U.S. Department of Health and Human Services (USDHHS, 2000) only 29% of mothers in the United States breastfeed for at least 5–6 months. The goal of Healthy People 2010 is to increase that rate to 50% (USDHHS, 2000). In a study of 74 women with the intention to breastfeed (Chezem, Friesen, & Boettcher, 2003), researchers found that women who planned to combination feed (i.e., combine breastfeeding with human-milk substitutes) also planned for a shorter duration of breastfeeding. Indeed, they breastfed for a shorter period of time.

Did these women meet their own goals? While only 14% planned to breastfeed for less than three months, 42% actually did. Women who planned to breastfeed for more than six months, however, were more successful in reaching their goals: Forty-six percent planned to breastfeed for six months or more, and 40% actually did. Moreover, the authors stated, "Women planning to exclusively breastfeed were almost twice as likely to achieve their feeding goal as were those planning to combination feed" (Chezem et al., 2003, p.43).

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Early Postpartum Discharge from Hospital

In recent decades, the length of hospital stay following both vaginal and cesarean births has decreased for both mothers and infants in the United States, Canada, and other Western countries. A major reason for this trend has been the goal of curtailing hospital costs. Two large studies have examined the effect of early postpartum discharge. A Canadian-population-based study examined 2,827,463 women who gave birth over an 11-year period between 1989 and 1999 (Liu et al., 2002). Another study in Massachusetts examined an HMO population of 20,366 women who gave birth between 1990 and 1998 (Madden et al., 2002).

The Canadian study (Liu et al., 2002) focused on the effect of early discharge on maternal health, as evidenced by maternal re-admission for obstetrical conditions. The researchers found that the risk of re-admission was substantially increased for mothers with cesarean births, and that the increase was linear. In comparison with mothers who remained in hospital for five days, there was a 10% increase of re-admission occurred among mothers who stayed four days, an 18% increase among mothers with a three-day stay, and a 21% increase among mothers who remained two days or less. Puerperal infections and postpartum hemorrhage were the most common reasons for re-admission, a finding similar to that of other studies. The authors suggested that the practice of sending mothers home within 3–4 days following cesarean birth “should be re-evaluated, and additional research should be undertaken to confirm or further explain the adverse effects of short LOSs for women with a cesarean delivery” (p.684).

Madden and her colleagues (2002) studied newborn health outcomes and HMO expenditures. During the 7-year period of the study, two changes occurred. First, the HMO to which all of the families belonged, instituted an early discharge protocol of one postpartum night in the hospital and one home visit by a nurse within 48 hours after discharge. Subsequently, Massachusetts law

established a minimum hospital stay of 48 hours for mothers who had a vaginal birth. They found no sudden changes in the rate of urgent visits for neonatal care with either shift in policy. This was true not only in the total population but also in a vulnerable subgroup (i.e., women enrolled in Medicaid, women living in a low-income neighborhood or a neighborhood with a low level of education, and women less than 22 years old). Home visits from a nurse—a characteristic of the HMO program—decreased from 90.2% to 83.2% after the state mandated a 48-hour hospital stay. The researchers admitted surprise in finding that the early-discharge program did not reduce the maternity-related costs of the HMO. Thus, the initial goal of early discharge was not met.

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