TREATMENT

Early discharge after nurse specialist education and planning plus follow up visits and telephone calls was cost effective for high risk pregnant women and their newborn infants


Question
Compared with routine care and discharge, does early hospital discharge with home follow up care by a clinical nurse specialist (CNS) improve maternal and infant outcomes and reduce cost of care for women with high risk pregnancies and their infants?

Design
Randomised controlled trial with follow up for 8 weeks after delivery.

Setting
A university hospital in Philadelphia, Pennsylvania, USA.

Patients
103 women with hypertension or diabetes mellitus were studied (mean age 27.5 y, 70% with = high school education, 37% married, 81% African-American). Inclusion criteria were speaking English at home and access to a telephone. Women were enrolled at the time of their first hospital admission during the pregnancy (n = 55) or at the time of delivery if no previous hospital admission had occurred (n = 41). Follow up was 93%.

Intervention
Women in the intervention group (n = 44) were discharged early from any hospital admission if they showed adequate knowledge and skills of healthcare needs for themselves and their infant, had adequate control of their conditions, and had received proper education and discharge planning from a CNS. In addition, they received follow up home visits from the CNS, telephone contact, clinic appointments, education, counselling, and telephone access to the CNS during her on call hours. Women and infants in the control group (n = 52) received routine care and discharge planning during all hospital admissions.

Main outcome measures
Length of hospital stay, rates of hospital readmissions and acute care visits, functional status, patient satisfaction, and birth weight. Costs included charges for all hospital stays and costs of CNS services.

Main results
For women who were enrolled before delivery, the intervention group had fewer antepartum hospital readmissions for glucose control (p < 0.05) and lower related total costs for these hospital admissions (US$286 v $2969, p = 0.02), longer gestational age (38 v 37 wk, p = 0.05), and showed a trend toward fewer low birthweight infants (2 v 9, p = 0.06) and greater satisfaction with care (p = 0.06) than women in the control group. For all women, the total costs for postpartum hospital admissions were lower in the intervention group than in the usual care group ($7087 v $8952, p = 0.02). The groups did not differ for all other outcomes measured.

Conclusion
Early discharge combined with in hospital nurse specialist education, skill training, and discharge planning; follow up visits; and telephone calls was cost effective for high risk mothers and their infants.

Commentary

The trial by York et al supports the contribution of a CNS to quality of care and cost containment. Results affirm other studies that have examined the practice, education, and support role of the clinically specific CNS. Both direct and telephone contact by a nurse specialist have been shown to be beneficial. The economic analysis adds evidence for the cost effectiveness of the CNS role.

The study was randomised, although the discordant sample size in the 2 groups was noted by the authors. Participants were from an urban American population, primarily African-American. Results and costs may differ for perinatal concerns other than diabetes and hypertension. The study was done between 1988 and 1991. Changing care practices may influence current benefits.

The study findings are relevant to community or hospital nurses and nurse administrators. Educators who plan graduate curricula should also note the skills and knowledge necessary for effective functioning in the CNS role.

The results suggest that the master’s prepared CNS helps women to assume greater self care responsibility, which creates short term economic rewards. A private practice, clinic, or hospital setting could employ a CNS to work with women in high risk childbearing situations to reduce the length and number of hospital stays and to generate savings while maintaining or improving satisfaction with care. The potentially longer term rewards of developing client attitudes of personal accountability and involvement in health care are also important. As health care continues to emphasise cost reduction and quality of care, CNS involvement in the care of high risk childbearing women appears to be one reasonable approach.

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