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The Effects of Baby Nurses on the Hospital Costs of Uninterrupted Service Presentations

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Abstract

Objectives: To determine the effect of uninterrupted service of infant nurses on hospital costs.

Materials and Methods:

The data were obtained by performing hospital archives. All women and children who had delivered in the last three months in the hospital were examined in the light of the archive information. A total of 890 files were found to be suitable for the research data. Data were analyzed using descriptive statistics in SPSS 21 package program.

Results:

890 deliveries were performed. It was determined that there were 154 infants who were thought to be risky infants. Three of them were referred to another hospital because their condition was serious. All of the 151 babies were referred to the Newborn Intensive Care Unit (NICU) before the baby nursing practice. However, baby nursing practice was approved to be sent to 110 NICU. Thus the rate of hospitalization of NICU decreased 27.2%.

Conclusion:

It was concluded that baby nursing greatly contributes to lowering hospital costs while comforting the mothers in terms of infant care. For this reason, it is recommended that 24 hour infant nursing practice be applied in all hospitals of our country.

Keywords: *baby care, baby nurse, newborn, mother*

Introduction

Health professionals have an important role to play in gaining and maintaining people's health (1). In particular, infants and children who are not able to act on their own health should play a role in protecting their health (2,3). Parents and then baby nurses play an important role in maintaining infant health and reducing infant mortality (4).

Baby nursing practice involves the appointment of nurses who take responsibility for infant health. The duties of the baby nurses in many hospitals in the application passed in Turkey; the delivery of the baby after birth, providing baby care, feeding the baby, establishing mother-infant communication, screening newborns, monitoring growth-development, discharge education and mother-baby visit at home (4).

Baby nursing is not only important for mother-infant health, but it can also have a significant impact on hospital costs through close monitoring and observation (5). In order to determine the effectiveness of baby nursing practice, it is necessary to examine the effectiveness-cost ratios. In the literature review, no studies examining the contribution of infant nurses to hospital costs were found.

Methods

A descriptive study was conducted retrospectively in order to determine the effects of infant nursing on hospital costs by analyzing the costs of infant health before and after continuous baby nursing practice in a public hospital. The sample group of the study consisted of babies born in the last three months (01 January-30 March 2018).

The questionnaire form prepared by the researchers in line with the literature was used as data collection tool. Archival documents were scanned for information such as the date of birth of the baby, interventions made after birth, and the presence of the mother.

The obtained data were analyzed by using descriptive analyzes such as number, percentage and mean in SPSS 21 package program. Ethical consent of the study was obtained from the Non-Interventional Ethics Committee of the Faculty of Health Sciences of Karamanoglu Mehmetbey University.

Results

As a result of a three-month archive evaluation; total 890 births were determined. The mean age of the mothers included in the study was 31.29 ± 5.62 years (min = 18 years, max = 44 years). Most of the mothers did not have a chronic disease (85.4%; n: 760) and did not become ill very often (89.9%; n: 800). Approximately 1/3 of the mothers (33.8%; n: 301) were the first children. Most of the babies were within normal limits in terms of birth weight and height.

The postnatal practices of the babies evaluated in the scope of the study are summarized in Figure 1. According to this; 736 infants were transferred to their mothers immediately after birth and 154 babies were referred to some clinics. As three of these babies were in critical condition, they were referred to another hospital, 14 babies were referred directly from the delivery room to the neonatal intensive care unit (NICU), 30 babies were first taken to the clinic and then referred to the NICU. It was found that 107 babies who were referred directly to the ICU before the baby nurse application were left under the supervision of the baby nurse. It was seen that 41 newborns were transferred to their mothers with the observation and care of the baby nurse and 110 newborns were referred to the NICU (Figure 1). Thus, it was determined that the number of NICU hospitalized infants was reduced from 151 to 110, thus the NICU hospitalization rate was reduced by 27.2% ($41 \times 100 / 151$).

The contribution of infant nursing to hospital cost was evaluated by considering the hospitalization fees at that period. During the period examined, the average cost of one-day stay in each NICU was 425 TL. In the last three months, if the 41 babies who were given to the mother without admission to the NICU were left in the NICU, the cost of hospitalization would be 41 infants x 425 TL = 17.425 TL. Considering that the average length of stay of a baby in the NICU was 5 days, this amount would increase to $17,425 \times 5 = 87,125$ TL. According to this, the amount of profit that the hospital made in three months with the application of baby nursing was 87.125 TL. Considering the high incidence of NICU nosocomial infections, this rate is expected to increase further.

Discussion

Health care is one of the important sectors with high costs. In particular, items spent in intensive care and cost of expenses is quite high. Intensive care units are also the departments where the patient stays intensively and the patient has the most hospitalization day. Considering all these reasons, the most important step in reducing hospital costs is the selection of patients who really need intensive care. Whenever any patient at risk is admitted to intensive care, there is no bed for the patient in need of intensive care and treatment may be postponed (6).

By controlling the costs of the health services provided in hospital enterprises, hospital managers; The company can make more accurate decisions about reducing costs, increasing the quality of services provided, using all kinds of inputs and outputs effectively and efficiently, and determining the performance of employees (6,7).

Patients admitted to ICU are exposed to numerous applications due to their current status (8). Each invasive procedure is a risk for nosocomial infection. Pathogenic microorganisms colonize invasive vehicle surfaces by the patient or health personnel, and colonization can lead to infection. Therefore, limiting the use of invasive devices as much as possible has an important role in preventing colonization and infection in these patients. Infection control

measures must be strictly observed, especially in neonatal units. Studies have shown that the total cost of infection control measures is equivalent to the cost of infection in four or five infants (8-10).

There is no literature study to determine the effect of Baby Nursing on hospital costs. However, it was observed that the number of infants admitted to the NICU was reduced by 27.2% in the three-month period following infant nursing practice, and the hospital cost was 87.125 TL. This situation can be considered as evidence of how important the practice of infant nursing is.

In addition to this benefit, it is thought that infant nurse may have important effects in preventing neonatal infections. Decreasing the number and length of NICU hospitalizations also means decreasing the frequency of nosocomial infections. In the literature, it has been reported that NICU rates vary between 5-66% of hospital infections (10).

Exposure to the infant while in the NICU will result in further hospital costs. The high prevalence of infections in the NICU leads to the introduction of empirical antibiotics. Invasive procedures in the NICU and high mortality rate necessitate this practice. Irrational use of the antibiotic can cause resistant infections and fatal candida infections, but can also lead to serious costs (9). Accordingly, the infant nurse plays an important role in reducing patient and hospital costs, while at the same time preventing the development of resistant infections in the early period.

Conclusions And Recommendations

In the archive review, it was found that the baby nurse decreased the NICU hospitalization rate by 27.2% and drastically reduced the costs during the three-month period. According to these findings; It is seen that infant nurses are effective in reducing both hospitalization rates and hospital costs. In this direction, it is recommended that baby nurses, like nurses working in other internal and surgical branches, define their duties and powers and provide 24-hour uninterrupted service in hospitals.

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Figure 1. Births in the last three months after starting the baby nurse and distribution of the newborns according to the procedures

