A Quality Improvement Project to Increase Breast Milk Expression in the NICU
Mary Ellen Connolly MSN, CPNP*, Kathleen M. Buckley, PhD, RN, IBCLC
University of Maryland Medical Center
Baltimore, Maryland

Introduction

• Premature infants fed breast milk are less likely to develop infections, retinopathy of prematurity, chronic lung disease, and necrotizing enterocolitis
• Challenge of Neonatal Intensive Care Unit (NICU) team - how to support mothers to provide adequate supply of breast milk
• To initiate & maintain an adequate milk supply requires mothers to
  • begin breast milk expression shortly after delivery
  • express breast milk every 3 hours with a double electric hospital grade pump
  • for a minimum of 14 days
• Pumping programs in which NICU nurses trained as “breast milk champions, support mothers and review pumping log daily with mothers increase breast milk volumes

Objectives

• To describe interventions the bedside nurse can incorporate into routine patient care to increase breast milk expression rates in the NICU.
• To discuss the impact of the NICU team and the NICU environment on the effectiveness of a pumping program.
• To identify components of a successful pumping program in the NICU.

Methods

Sample:
• 13 mothers who had given birth to infants with diagnoses of prematurity, twin or triplet gestation, gastroschesis, and omphalocoele.
• 77% of the women enrolled in the program were African American and receiving Medical Assistance

Setting: NICU in large urban academic medical center

Design: Quality improvement project

Methods:

• 5 NICU nurses volunteered to be breast milk champions and received education about the benefits of breast milk and the key factors involved in maintaining an adequate milk supply
• Champions engaged mothers in conversations using the “Coming to Volume Assessment Tool” as a guide to assess pumping effectiveness
• Upon completion of program Champions were interviewed to ascertain their feedback about benefits, ease of use and future directions for the pumping program.

Key Findings:

Mothers who reached breast milk volume goal (800-1280 ml/day):
• met with a breast milk champion 3-7 times during 6 week project period
• expressed 5-10 times daily
• used hospital grade double electric pumps

Breast milk champions reported:
• participation in project was a positive experience
• mothers were open to discussions about breast milk expression
• frequent conversations with mothers about breast milk expression was easy and not very time consuming
• coming to volume assessment tool was useful and offered a good framework for discussion
• intensive education on breastfeeding for providers in NICU could be beneficial for increasing effectiveness of program

Number of Contacts with Breast Milk Champion and Breast Milk Volumes

Conclusions

Summary:
• The coming to volume assessment tool was easy to use and incorporate into the bedside NICU nurse’s daily routine
• Contact with a breast milk champion had a positive effect on mothers’ breast milk expression volumes
• Frequent conversations with mothers about breast pumping effectiveness was a positive experience for both the mother and bedside nurse

Implications for Practice:

• A structured breast pumping support program is necessary to ensure mothers’ adequate breast milk supply
• Coming to volume assessment tools should be incorporated into the electronic medical record to ensure communication between providers and monitor progress of a breast pumping program
• The success of breast pumping programs are dependent upon:
  • an adequate supply of hospital grade double-electric breast pumps
  • privacy for breast pumping and discussions with mothers
  • nurses and physicians who are educated on how to promote breastfeeding
  • access to lactation specialists for consultation as needed

References


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