

Factors Affecting Exclusive Breastfeeding at a Tertiary Maternity Hospital

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The benefits of breastfeeding to mother and child are well described. However, current exclusive breastfeeding rates in Ireland at discharge from hospital are under 50%¹. Only 15% of Irish infants are exclusively breastfed at six months of age, compared with a global figure of 38%². In this retrospective study, we aimed to identify factors that could affect exclusive breastfeeding rates among primiparous women during three time periods between 2019 and 2021 in a large tertiary maternity hospital.

We carried out a chart review at a single tertiary maternity hospital (8,500 deliveries/year). All term infants delivered to primiparous women whose feeding preferences were documented during three 2-week periods in December 2019 (Pre COVID 19 Pandemic), July 2020 (Year 1 COVID 19 Pandemic) and July 2021 (Year 2 COVID 19 Pandemic) were included. Any mothers of infants who were intending to formula fed exclusively or transferred directly to the neonatal ICU were excluded.

Data from 461 patients were collected: 356 mothers expressed their intention to breastfeed; In total, 165 (46%) infants were exclusively breastfeeding on discharge (EBF), and 191 were non-exclusively breastfeeding (NEBF) on discharge. The maternal age was similar in both groups [31±5 vs. 32±5 years, $p=0.12$], but there was a higher rate of caesarean deliveries [49% vs. 26%, $p<0.01$], and higher BMI > 30 [23% vs. 10%, $p<0.01$] in the NEBF group. In addition, there was a higher rate of mothers of Asian descent, mothers with private health cover, gestational diabetes (GDM) and hypothyroidism in the NEBF group. There was no difference in the exclusive breastfeeding rates across the three epochs: 46% in 2019, 49% in 2020 and 44% in 2021 ($p=0.71$). There were no differences between the two groups when assessing employment status or use of epidural pain relief in labour.

Neonates in the EBF group had higher gestational age (40.0 ± 1.4 versus 39.5 ± 1.5 , $p < 0.01$), and a greater percentage weight loss at discharge (6.3% vs. 4.2%, $p < 0.01$). There was no difference in birthweight, discharge weight or gender between groups. Time to first breast feed, or whether skin-to-skin was performed did not differ between EBF and NEBF groups.

Multivariate analysis was performed to evaluate factors influencing exclusive breast feeding at discharge. Delivery by caesarean section [aOR 0.57 (0.44 – 0.75)], maternal obesity [0.69 (0.50 – 0.93)], and gestational diabetes [0.39 (0.18 – 0.86)] all negatively affected the odds of EBF at discharge. Gestational age and insurance status did not significantly impact the odds of EBF.

This study summarises the factors influencing exclusive breastfeeding at discharge, among a group of primiparous women with healthy infants, in an Irish maternity setting. We found that Caesarean sections, maternal obesity, GDM and ethnicity were associated with NEBF at discharge. Low rates of EBF at discharge have been associated with shorter durations of breast feeding, thus, to facilitate an improvement in Irish breastfeeding rates, it is critical we address these factors. Antenatal education and postnatal support must be improved for primiparous women, particularly those at higher risk of NEBF; women who deliver by caesarean section, are obese or have GDM. While early supplementation may be medically indicated e.g. for neonatal hypoglycaemia, all healthcare workers should be trained in the principles of “Baby Friendly Hospital Initiative”. Access to post-discharge lactation support for primiparous women is essential to improve duration of breastfeeding and these services must be available to all patients, particularly those who face additional social and language barriers.

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