

Survey of Maternity Unit Guidelines regarding Formula Supplementation of Breastfed Babies

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Abstract

Aim

To investigate existing guidelines on medical indications for supplementation of breastfeeding in 19 maternity centres and two neonatal units of tertiary centres.

Methods

A cross-sectional survey on common medical indications for supplementation (such as jaundice, hypoglycaemia and weight loss), as well as availability of lactation support was sent to 19 maternity hospitals and two neonatal units in Children's Health Ireland.

Results

Out of 21 units, 57% (n=12) had guidelines for supplementation in breastfed infants. 41% (n=5) suggested to supplement cases of neonatal jaundice. 66% (n=8) recommend supplementation of breastfeeding hypoglycaemic babies. 75% (n=9) recommended supplementation for 10% weight loss since birth. No centre recommended medications to supplement milk supply. Lactation support was available across all the participating units.

Discussion

Formula supplementation affects maternal-infant bonding. More evidence-based guidelines are needed to ensure such supplementation to breastfeeding is provided for actual medical situations.

Introduction

Parents rightly exert autonomy when deciding how to feed their babies, influenced by personal preference and societal factors¹. Exclusive breastfeeding is recommended where

possible². Only 63% of Irish mothers initiate breastfeeding (BF) and only half of these exclusively BF by 3 months^{3,4}.

Formula supplementation may reduce duration of BF^{5,6}, and avoidance is recommended where feasible. Medically-indicated formula supplementation may reduce morbidity in conditions such as hypoglycaemia, but introduction occurs without a clear medical reason⁶. BF babies do not generally require supplementation for the management of jaundice (or during phototherapy). Frequent feeding, lactation support and expressed breast milk (EBM) may be encouraged, with formula as a last resort^{7,8}. This survey examined supplementation guidelines across 19 Irish maternity and 2 surgical neonatal centres.

Methods

This survey evaluated local guidelines on the supplementation of BF in Ireland. A questionnaire on BF supplementation was emailed to nursing/midwifery staff at each centre, with follow-up phone calls if required.

Results

All enrolled units responded (Table 1). 57% had established clinical guidelines on formula supplementation in breastfed infants, with one guideline in development.

41% of guidelines recommended supplementation for neonatal jaundice; 80% in all jaundice and one limited to babies receiving double phototherapy. Only one unit recommended EBM use before formula.

Hypoglycaemia was another common indication for supplementation of BF. 8 out of 12 guidelines discussed supplementation of breastfed babies with hypoglycaemia, however thresholds for supplementation varied. Two centres recommended formula after one low blood sugar, and such levels triggering supplementation varied from 2.0mmol/L to 2.8mmol/L. Eleven units used 40% dextrose gel (Glucogel™) before formula.

75% of units recommended formula supplementation for weight loss in breastfed infants; seven introduced formula at 10% weight loss, two at 11%, and one recommended EBM as a first line management at 12% weight loss, followed by formula if required.

1.	What level of neonatal care does your hospital provide?	☐ Special nursery ☐ Level 2 NICU ☐ Tertiary NICU
2.	Does your practice have a guidelines that recommends supplementation (topping up) of breastfeeding with formula?	☐ Yes ☐ No
3a.	Does your local guideline suggest supplementation in cases of neonatal jaundice?	☐ Yes ☐ No
3b.	If yes, which of the following applies according to your guidelines?	☐ All cases of jaundice (whether or not phototherapy is required) ☐ Cases managed with Simple phototherapy (1 light) ☐ Cases managed with Double-lights phototherapy (2 or more lights)
4a.	Does the guideline suggest supplementing breastfeeding with formula for hypoglycemia?	☐ Yes ☐ No
4b.	Does the guideline suggest supplementation after a <u>single episode</u> of hypoglycemia?	☐ Yes ☐ No
4c.	If yes, which of the following levels would trigger supplementation with formula?	☐ Glucose 2.8 – 4.0 ☐ Glucose 2.6 – 2.8 ☐ Glucose 2.0 – 2.6 ☐ Glucose <2.0
4d.	Do you use any intervention other than feed supplementation for hypoglycaemia on the postnatal ward (e.g. glucogel)?	☐ Yes ☐ No
5a.	Does the guideline suggest supplementing breastfeeding with formula for weight loss?	☐ Yes ☐ No
5b.	If yes, which of the following percentages of weight loss below birth weight would trigger supplementation?	☐ >8% weight loss ☐ >10% weight loss ☐ >11% weight loss ☐ If none of the above, which percentage? ____%
6	Does the guideline recommend use of medication to supplement maternal milk supply?	☐ Yes ☐ No

7a.	Do you have lactation consultants available for inpatient support?	☐ Yes
7b.	If yes, how many?	☐ No
8	Do you have a guideline for weaning off formula supplementation?	☐ Yes
		☐ No

Table 1. Detailed questions of the survey across all 19 maternity units in Ireland and two neonatal units in CHI.

No guidelines recommended medication to augment maternal milk supply, and all units had inpatient lactation consultants available.

Only two units did not have guidelines on weaning off formula supplementation when maternal supply improved or the medical indication resolved, but 10 units did offer individualised weaning plans.

Discussion

Breastfeeding is a parental choice. Supplementation may reduce duration of breastfeeding (BF). 43% of Irish units did not have guidelines on formula use during breastfeeding, and existing guidelines were not in line with international recommendations^{8,9}.

Formula supplementation for jaundice (including double phototherapy treatment) is no longer recommended in most infants, but this was not reflected in guidelines. There is a role for healthcare and maternal education on exclusive breastfeeding of well-jaundiced infants.

Hypoglycaemia may require immediate intervention to avoid serious morbidity. 66% of centres had guidelines discussing breastfeeding infants with hypoglycaemia but differed with respect to formula alternatives and the use of oral colostrum as a first line intervention.

Few centres had guidelines on formula use in weight loss, and thresholds varied. While weight loss is multifactorial, adequate lactation support is key for prevention and management. Unfortunately, lactation staffing was well below international recommendations in this survey⁹. Only two units had guidelines on gradual weaning of supplemental feeds when no longer needed.

In conclusion, universal, up-to-date, evidence-based guidelines on judicious formula supplementation are needed to minimise unnecessary disruption of breastfeeding.

Declarations of Conflicts of Interest:

None declared.

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