Monitoring Formula Use in Cavan Monaghan General Hospital
Audit report to BFHI

Authors:
Aileen Doyle & Martina Barry, Clinical Midwife Specialists in Lactation

Date: 22 April 2014


1. INTRODUCTION
Between January and December 2013 an audit was performed to assess whether the amount of formula ordered from the hospital's stores department corresponded with the number of infants feeding on formula during this time period.

Aim: To assess compliance with the International Code of Marketing of Breast-milk Substitutes regarding providing formula when there was no need.

Rationale: To maintain Baby Friendly standards.

Previous audits: The close monitoring of formula use in the maternity unit has been happening since 2008. A summary of the amount of formula used in the maternity unit can be reviewed in the appendices.

2. METHOD AND SAMPLE
The actual amount of formula ordered by the maternity unit each year is provided from the stores department. An estimate of how much formula is required is calculated based on the percentage of mothers artificial feeding, the percentage of mothers combined feeding and those who discontinued breastfeeding prior to discharge.

To help further improve the accuracy of this calculation an estimate of formula use for babies in the Special Care Baby Unit (SCBU) was also included in the calculation. The amount of formula given out in the maternity unit is counted on a daily basis by the Health Care Assistant’s (HCA's), however due to the frequent turnover of HCA’s working on the maternity unit the records are frequently incomplete and there is also no-one counting how much formula is being used in the SCBU. Due to the inaccuracy of these records the actual amount of formula required by the unit can only be determined by a rough estimation.

3. RESULTS
The table in the appendices gives a summary of the formula ordered alongside an estimation of what the unit should be using for the last five years. The table also highlights how much extra formula was provided to the unit, this figure was further used to calculate the extra cost to the unit as a result of the extra formula provided. In 2013 the amount issued by
stores was greater than the estimate of formula required for the unit. The total cost to the unit for excess formula ordered was €1053. A detailed breakdown showing how this calculation was determined for the year 2013 can also be examined in the appendices.

4. DISCUSSION
The figures for 2013 show that the unit has reduced the amount of excess formula used by the unit and subsequently reduced the extra costs to unit when compared to the figures in 2012. Although the improvement was good, the saving was not as good as in 2010.

The unit still appears to use more formula than it should need to, thus highlighting a need for continuous close monitoring of the formula used by the unit if we are to ensure that mothers are not getting free formula beyond their hospital stay and if we are to decrease the costs to the unit for the excess formula used.

The main limitations of this audit are that the figures are based on a rough estimation of what the unit should be using. Unfortunately it is difficult to track accurately the exact number of bottles given out on a daily basis.

5. CONCLUSION & RECOMMENDATIONS
These figures were discussed at a ward meeting on the 11th April. The formula will remain in a locked cupboard and the HCA’s will be responsible for distributing the formula. The HCA’s will also perform a daily count of how much formula is distributed. The CMS in Lactation will follow up with stores on a monthly basis to review how much formula is ordered.

6. ACTION PLAN / QUALITY IMPROVEMENT PLAN

<table>
<thead>
<tr>
<th>Action</th>
<th>Person responsible</th>
<th>Date for completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educate all HCA’s on how to distribute and monitor formula.</td>
<td>CMS in Lactation</td>
<td>May 2014</td>
</tr>
<tr>
<td>All Staff to be informed of the excess formula ordered by the unit</td>
<td>Line Mangers for each area</td>
<td>April 2014</td>
</tr>
</tbody>
</table>

7. ACKNOWLEDGEMENTS
Thanks to all the HCA’s who have been working very hard to closely monitor the distribution of formula.

8. REFERENCES

9. APPENDICES
Appendix 1: Formula ordered for the Maternity unit
Each year a request is made to Stores to provide a breakdown of how much formula is ordered for the whole Maternity unit.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of live births</th>
<th>BF</th>
<th>AF*</th>
<th>CF#</th>
<th>Stopped BF</th>
<th>Estimate of formula required (cases)</th>
<th>Amount issued by stores (cases)</th>
<th>Excess formula used (cases)</th>
<th>Extra cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1941</td>
<td>56%</td>
<td>44%</td>
<td>4%</td>
<td>10%</td>
<td>980</td>
<td>1316</td>
<td>336</td>
<td>€4758</td>
</tr>
<tr>
<td>2009</td>
<td>1931</td>
<td>58%</td>
<td>42%</td>
<td>3%</td>
<td>7%</td>
<td>900</td>
<td>1139</td>
<td>239</td>
<td>€3384</td>
</tr>
<tr>
<td>2010</td>
<td>2023</td>
<td>58%</td>
<td>42%</td>
<td>4%</td>
<td>10%</td>
<td>981</td>
<td>984</td>
<td>3</td>
<td>€42</td>
</tr>
<tr>
<td>2011</td>
<td>2041</td>
<td>54%</td>
<td>46%</td>
<td>4%</td>
<td>7%</td>
<td>1041</td>
<td>1504</td>
<td>463</td>
<td>€6556</td>
</tr>
<tr>
<td>2012</td>
<td>1910</td>
<td>48%*</td>
<td>52%</td>
<td>4%</td>
<td>10%</td>
<td>897</td>
<td>991</td>
<td>96</td>
<td>€1248</td>
</tr>
<tr>
<td>2013</td>
<td>1905</td>
<td>46%*</td>
<td>51%</td>
<td>3%</td>
<td>9%</td>
<td>1082</td>
<td>1219</td>
<td>81</td>
<td>€1053</td>
</tr>
</tbody>
</table>

* Artificial feeding * Combined feeding * Exclusive

Each mother that is formula feeding should only be given 8 bottles per day and only what is required on the day of discharge. Bottles should not be sent or given home with mothers even if they request same.

Appendix 2: Calculations of formula use

Estimation of what formula should have been used in 2013
Total babies born in 2013 = 1905
Total number of babies discharged from hospital on formula = 979 babies
Total number of babies combined feeding on discharge = 43 babies
Percentage of babies admitted to SCBU = 17% = 324 babies

Estimation of formula used based on these statistics
Formula use for babies formula feeding = 979 x 8 bottles x 3 days = 23496 bottles
No of cases = 23496 ÷ 24 = 979 cases
*(Based on using 8 bottles per day and staying an average of 3 days in hospital)*
Formula use for babies that combined feeding on discharge = 43 babies
No of cases = 516 bottles ÷ 24 = 22 cases
*(Based on using 4 bottles per day and staying 3 days)*
Formula use for babies in SCBU = 97 babies x 4 x 5 = 1940 bottles
*(Based on 30% formula feeding rate and staying 5 days)*
No. of cases = 1940 bottles ÷ 24 = 81 cases

Estimation and actual amount of formula used
Total estimation for formula used = 979 + 22 + 81 = 1082 cases
Average stock kept in maternity (SCBU and Ward combined) = 56 cases
Total = 1082 + 56 = 1138
Actual amount of formula issued by stores in 2013 = 1219
Excess Formula amount used = 1219 – 1138 = 81 cases
Excess cost = €13 per case = €1053