Minimizing the Risks of Artificial Feeding in Northwestern Tanzanian Refugee Camps

Information provided by Lucas Machibya, UNHCR

Issue 1 | Supplement 1 | July 2007

Introduction
The United Nations High Commissioner for Refugees (UNHCR) was the first organization to develop a policy on milk products for infants in complex emergencies. In 1989, the first edition of the *UNHCR Policy Related to the Acceptance, Distribution and Use of Milk Products in Refugee Settings*\(^1\) was published, based on the *International Code of Marketing of Breast-milk Substitutes*.\(^2\) Subsequently, an interagency effort for an operational guide for emergency feeding was developed.\(^3\) Partly developed by CARE, *Infant and Young Child Feeding in Emergencies: Operational Guidance for Emergency Relief Staff and Programme Managers* forms the basis of CARE's activities related to the protection, promotion and support of breastfeeding in emergencies.

In 1993, UNHCR responded to a refugee-based national health emergency in Tanzania by providing maternal-health and infant-feeding services in the northwestern part of the country. By December 2006, this operation was managing approximately 11 camps with 284,000 refugees, 54 percent from Burundi, 46 percent from the Democratic Republic of Congo. An estimated 60,900 were children under five years of age (23 percent infants).

UNHCR monitors BMS procurement by these agencies, which oversee artificial-feed funding, supply and storage in the camps.\(^6.0\) UNHCR coordinates the amounts of artificial feeds kept and used by each agency, and also reallocates resources when they run low.\(^6.3.1, 6.1.4\)

BMS and infant formula are monitored for frequency of procurement, estimated need (plus contingency), type of formula and formula packaging. Artificial feeds are ordered with other medical consumables on a quarterly basis through an infant-formula requisition form, completed by the nutritionist or reproductive health manager and signed by the medical coordinator.\(^6.1.2\) Careful estimates of quantity are based on reporting indicators, including maternal death rate, teenage pregnancies, prevention of mother-to-child HIV/AIDS transmission and the number of women not exclusively breastfeeding and for whom replacement feeding is Acceptable, Feasible, Affordable, Sustainable and Safe (AFASS; Figure 2).\(^6.3.4\) Furthermore, orders are based on the amount of artificial feeds consumed during a three-month period, with an additional 10 percent as emergency contingency.\(^6.3.4\) Keeping small stocks is not a problem, since transportation to the camps remains reliable.

Camp nutritionists decide the type of formula procured: generic, with culturally appropriate labels, including diagrams and written instructions in the most common language.\(^6.3.3\) Health workers also educate mothers on proper quantities, nutrition values, preparation, storage and shelf life.\(^6.3.2\) Agencies adhere to UNHCR procurement procedures, in which successful bidders procure and supply the entire consignment of required BMS.

Distribution
If alternate feeds are necessary, mother and infant remain in the hospital compound, where nurses help the mother with BMS preparation, administration and feeding, and keeping the prepared milk.\(^2.4\)

After a few days in the hospital, the mother is discharged to her home, where social and family assistance is provided. Health workers and breastfeeding-group members visit her every two days for the first two weeks and weekly after that.\(^6.2.3\) These visits assess the mother's ability to prepare formula, feed her infant, position the infant for breastfeed-

---

**Figure 1. Determinants necessitating the use of BMS or infant formula**\(^6.2.2\)

- Deceased mother
- Mothers with sore or cracked nipples
- Mothers not breastfeeding due to health status
- Severely sick mothers who cannot breastfeed
- Rape victims
- HIV-positive mothers meeting AFASS criteria
ing, perform exercises to promote re-lactation, practice personal hygiene, and clean and clothe her infant; the mother also receives information on complementary feeding, such as when to start and what foods to use. Health workers perform routine exams on the infant and follow up on the growth card, immunizations and amount of BMS consumed per meal. Findings are recorded on a standardized checklist and reported to the reproductive health manager. In addition, mother and infant continue to visit Maternal and Child Health (MCH) centers for recommended growth monitoring.\textsuperscript{6,2,3}

The breastfeeding group includes national and refugee health staff as well as community health workers (CHWs), traditional birth attendants (TBAs) and traditional healers. UNHCR trains group members on breastfeeding counselling, emergency infant and young-child feeding, prevention of mother-to-child HIV/AIDS transmission (PMTCT), and voluntary counselling and testing.\textsuperscript{6,2,4}

Cooking utensils, thermoses and spoons are issued with BMS on a case-by-case basis to support mothers post-partum.\textsuperscript{6,1,2} Vulnerable families receive wood from a UNHCR distribution system or through a community-services agency.\textsuperscript{6,2,5} At the MCH centers, national or refugee staff, CHWs and TBAs teach women how to clean and maintain their thermoses and also to heat milk before giving it to their babies.\textsuperscript{6,2,4} Mothers are trained to keep their milk in a thermos for a maximum of three hours and to only use a cup — not a spoon — for feeding, as this inhibits the infant suckling reflex.\textsuperscript{6,3,5}

\textbf{Management}

UNHCR collaborates with camp agencies on a monthly basis. Agencies prepare comprehensive reports for UNHCR on infants requiring BMS or formula to initiate discussions on whether artificial feeding was justified.

Advice is provided by UNHCR, UNICEF and WFP nutritionists. Camp stocks of infant formula are reviewed, as are social and health-related problems that families face as they feed and support infants.\textsuperscript{6,1,3} Further interagency collaboration involves camp visits to observe management of pre- and post-delivery counselling and education.

\textbf{Helping Mothers Return to Breastfeeding}

Though BMS and infant formula can help mothers who cannot produce enough milk, breastfeeding remains the optimal method for infant feeding. Thus, the development of programs on infant feeding allow for a greater return to breastfeeding by mothers in emergency situations.

The protocol to assist mothers in their return to breastfeeding begins immediately following delivery. The mother receives support and information from nutritionists, nurse midwives and TBAs regarding her particular situation and what measures she can take to begin lactating or to increase her milk supply. As a result, more than 95 percent of mothers that UNHCR and affiliated agencies have worked with in the refugee camps in northwest Tanzania have returned to exclusive breastfeeding.

During emergencies, some women may fear that stress or a change in diet will make breastfeeding difficult. With the support of an enabling environment of health workers, family and community members, these mothers are in a better social position to improve the health and welfare of their children during this critical developmental period.

\begin{figure}[h]
\centering
\begin{tabular}{|l|}
\hline
**Figure 2. Calculations to project quantity of BMS for procurement**
\hline
1. Determine average amount of BMS used in past years based on all exclusive situations that have necessitated their use*  
\textbf{Situation 1: Total number of maternal deaths}  
(Maternal deaths in 2006 + Maternal deaths in 2005) / Total years = Average number of maternal deaths  
Ex: (1 death in 2006 + 2 deaths in 2005) / 2 years = 1.5  
\textbf{Situation 2: Total number of women with breastfeeding problems}  
(Women with breastfeeding problems in 2006 + Women with breastfeeding problems in 2005) / Total years = Average number of women with breastfeeding problems  
Ex: (33 women in 2005 + 38 women in 2006) / 2 years = 35.5  
\hline
2. Estimate the total number of beneficiaries from calculations in Step One  
Average number of maternal deaths + Average number of women with breastfeeding problems = Total beneficiaries  
Ex: 1.5 + 35.5 = 37 beneficiaries per year
\hline
3. Determine quantity of BMS needed  
# Beneficiaries x Average infant weight** x Average amount of BMS consumed (kilograms)*** x Estimated time BMS will be used**** = Total amount to procure for 6 months  
Ex: 37 beneficiaries x 3.5 kilograms x 22.5 grams/1000 x 183 days = 533.22 kilograms  
533.22 kilograms = 0.53 Mts (metric tons rounded)  
0.53 Mts = Amount of BMS procured for 6 months
\hline
\end{tabular}
\caption{Calculations to project quantity of BMS for procurement}
\end{figure}

\begin{itemize}
\item * Other situations may include number of low birth weight infants, premature infants, or PMTCT women meeting AFASS criteria
\item ** Average infant weight = 3.5 kilograms
\item *** Total quantity of BMS consumed by infant/meal = 22.5 grams
\item **** Number of days to be covered:  
\begin{itemize}
\item 6 months for procurement = 183 days
\item 12 months for budgeting purposes
\end{itemize}
\end{itemize}