A natural resource: MOTHER'S MILK

Tufts nutritionists work worldwide with UNICEF to ensure babies get the best start in life

BY LAURA FERGUSON

ANURADHA HARINARAYAN always planned to breastfeed her baby but expected that her graduate school schedule would mean giving way to bottles of formula. Then she heard Helen Armstrong. A Tufts lecturer, Armstrong is an articulate and persuasive speaker on the myriad health benefits of breastfeeding. Now Harinarayan holds her first child, four-month-old Shashank, in her arms. It has not been easy, but she intends to keep breastfeeding.

"The commitment paid off as I saw him grow," says Harinarayan, who will use her joint master's from the School of Nutrition Science and Policy and the Fletcher School to work with mothers and infants in her native India. "Helen was right about the emotional benefits of breastfeeding, and there is no doubt that nutritionally it was the best decision."

That is good news for Armstrong and for Dora Gutiérrez, who work for the nutrition section of UNICEF New York

Dora Gutiérrez, Helen Armstrong with graduate student Anuradha Harinarayan and her baby Shashank.

PHOTOGRAPH: ED MALITSKY

on the joint WHO/UNICEF Baby-Friendly Hospital Initiative (BFHI). Through this seven-year-old program, over 13,000 hospitals in 117 countries have changed their maternity practices and generated community-based support for breastfeeding. The Tufts contribution strengthens and updates technical knowledge among health professionals, and builds communication skills with new mothers, promoting breast milk as the ideal food to protect children against illness and disease. The program advocates exclusive breastfeeding for the first six months of life, and sustained breastfeeding, along with other foods, up to the age of two and beyond.

For Armstrong, who works with UNICEF offices and breastfeeding specialists throughout the world, and Gutiérrez, who focuses on hospitals in Latin America, Harinarayan's experience confirms what nutritionists have known for years: among its many benefits to mother and child, breast milk is an inexpensive and unparalleled source of nutrients. Breastfeeding provides a continuing household supply of easily digested milk, a perfect nutrient balance as well as a source of critical antibodies that give a child immunological protection. According to a December 1997 statement of the American Pediatric Association, breastfeeding is also positively associated with cognitive development. Responsive nursing also creates a bond between mother and child, an intimacy valued especially by the many breastfeeding women who must be away from their babies at work or school for large portions of the day.

But as Armstrong and Gutiérrez know, translating advocacy messages can prove difficult, particularly when commercial influences, misinformation, longstanding attitudes and cultural habits stand in the way. Mothers may become confused and discouraged, for instance, when they combine breastfeeding with other feeding practices that interfere with milk production.

"It's a supply and demand system," explains Armstrong. "Anything that diminishes the interactive process tends to diminish the production. . . . Lots of women say, 'I don't think I can do it. I had no milk for my last child.' We have to support them and provide some helpful information. When they understand how breastfeeding works, they can have plenty of milk this time."

Globally, the associated health benefits of breastfeeding are clear. According to the World Health Organization (WHO), breastfeeding saves an estimated six million children every year, but another estimated 12 million children under the age of five die, due mainly to infections and diseases that are far less common among breastfed babies.

Reaching vulnerable children

Gutiérrez, a physician trained in her native Colombia, and Armstrong share an office at the School of Nutrition Science and Policy. From floor to ceiling, colorful signs of their commitment to the future of children line the walls. UNICEF postcards of young faces frame a door, while a map covered with tiny pins indicates the global scope of training courses. It is an appropriate backdrop for photographs of colleagues and nursing mothers, and favorite souvenirs—such as the matchbox from Bangladesh that promotes breastfeeding.

These strong convictions are necessary in a field where the task at hand is both immense and complicated. In response to marketing claims that infant formula is a match for breastmilk, in 1981 the World Health Assembly and WHO adopted the International Code of Marketing of Breastmilk Substitutes. But according to UNICEF's 1998 publication State of the World's Children, progress translating the code's minimum provisions into national laws has been slow. By September 1997, only 17 countries had approved laws in accord with the code.

In 1991, WHO and UNICEF, two agencies of the United Nations, took a grassroots approach to this global challenge by developing the Baby-Friendly Hospital Initiative, which would train the professional staffs of maternity hospitals in lactation management and maternal support. The School of Nutrition Science and Policy's affiliation began a year later when Tufts took on the first of several contracts to provide technical expertise and training.

"When Margaret Kyenkya-Isabirye, the infant feeding officer at UNICEF New York, invited me to work with the Baby-Friendly Hospital Initiative in 1991, she almost scared me off when she said, 'You can influence maternity care in every country.' That was a formidable challenge, yet I overcame my hesitations because the need to bring breastfeeding management into line with current knowledge was overwhelming," recalls Armstrong. "Dora joined me soon after, and the training materials we developed with our international colleagues are now published in all UN languages and used in countries throughout the world.

"The Baby-Friendly Hospital Initiative gave us a unique opportunity to reach the world's most vulnerable children—the infants—with the only food resource that every mother in the world controls," she continued. "UNICEF's vision of universal breastfeeding, and the hard work of its field staff and government counterparts in country after country, complemented our own vision of women's empowerment."

But is breastfeeding realistic for today's working mothers? In response, Armstrong points out that in the United States, some studies have shown that women with jobs are more likely to breastfeed than those who stay home. "Employed women around the world are learning how to leave their own or other milk to be cup fed to the baby, and to enjoy unrestricted breastfeeding when they are at home. This keeps their milk supply ample, while the breastfed children in day care have fewer illnesses because their mother's milk protects them. Whether a mother lives in a rich country or a developing one, her baby benefits dramatically from being breastfed."

As Armstrong points out, the breastfeeding message is a universal one. She was certified by the International Board of Lactation Consultant Examiners, building on years of experience with La Leche League in the United States, and later in Kenya, where she lived for 16 years and helped to found the Breastfeeding Information Group.

"La Leche League groups are run by accredited volunteer leaders. Women who are pregnant or nursing their babies get together once a month and have a conversation that's truly informative," says Armstrong. "They've been going 40 years and it was the first time women had said 'We won't rely only on doctors; we'll learn about this ourselves.' I was very struck with that self-reliance, and I still think the resulting woman-to-woman help is very powerful."

Baby-Friendly Hospitals foster a similar approach through community networks. "Ninety-five percent of what happens in breastfeeding does not require a medical answer," says Armstrong. "It requires only the help of someone experienced and reassuring. The 5 percent that might require medical treatment can then get very good help because the professional's time is well used for these special cases."

Cultural contexts

Working with senior-level health trainers, Armstrong and Gutiérrez have developed training guides. "Essentially we are empowering health care professionals so that they can be support mothers to breastfeed," says Gutiérrez.

But effective breastfeeding training must

take into account the mother's cultural context. In Malawi, for instance, data show that mothers tend to feed their infants water plus cereal or other food, a combination that interferes with breastmilk production and can result in sicker babies. A more ideal pattern exists in Rwanda, where 90 percent of babies are fed only breastmilk in the first months.

The differences, says Armstrong, are "partly cultural and partly commercial. Rwanda has not been strongly targeted by the formula companies, whereas Malawi has experienced heavy marketing and women have come to believe that their breastmilk isn't enough, that they have to give something else. Yet in most of sub-Saharan Africa, an adequate supply of infant formula costs between 35 percent and 150 percent of the urban minimum wage. Some families can afford formula, but a lot can only afford to buy a bottle and then fill it with water or a flavored sugar drink. Some stop breastfeeding when they go back to work, not realizing that they can do both."

Making Progress

Those misconceptions may eventually give way under the growing influence of retrained health workers. But the improved health of young children may ultimately be the program's best selling point. In Panama, the Ministry of Health reported a 58 percent reduction in respiratory infections and a 15 percent decline in diarrhea in infants in just one year in a Baby-Friendly Hospital. In Brazil, the Acari Hospital credits BFHI with dramatic cost savings from decreased hospitalization of infants and reduced fatalities.

"A girl or woman who sees the robust growth of exclusively breastfed babies among her neighbors is learning something important about her own capacities," says Armstrong. "As more and more infants are protected from the drawbacks of infant formula and the dangers of bottle feeds, the whole standard of health changes in a community. In Haiti, a UNICEF health officer told us that the diarrhoea clinics were having to close in areas where the BFHI had taken hold; they were simply redundant. Nothing is more gratifying than knowing we have had a share in this restoration of women's capacities to give their babies optimal health."

Yet continued progress toward reducing infant illness and death is an ongoing challenge. The World Alliance for Breastfeeding Action, founded in 1991, unites breastfeeding groups whose advocacy goes beyond hospital walls. That community support is critical, says Armstrong. "When the mother goes home she will often tend to let cultural norms and misconceptions tell her what to do, and here the BFHI is put to its toughest test.

"We need to work much harder on community support, on community networks. We hope that when a mother reaches for water, the other women will say, 'Oh, don't give him that! Look at my baby; he's four months and beautiful, and he's not had a drop of water. When he's thirsty, I give him my milk.' "