Importance of Optimal Infant and Young Child Feeding (IYCF) in Achieving Millennium Development Goals

Introduction

Millennium Development Goals (MDGs) represent the widest commitment in history to addressing global poverty and ill health. The fourth goal (MDG-4) commits the international community to reducing mortality in children aged younger than 5 years by two-thirds between 1990 and 2015. The first goal (MDG-1) pertaining to eradicate extreme hunger and poverty includes prevalence of underweight children less than five years of age as one of the indicator to gauge for achieving this goal(1).

Undernutrition is a largely preventable cause of over one third (3·5 million) of about 10 million child deaths annually(2). Deaths associated with inappropriate feeding practices mostly occur during the first year of life. By the time children reach their second birthday, if undernourished, they could suffer irreversible physical and cognitive damage, impacting their future health, economic well-being, and welfare. The consequences of insufficient nourishment continue into adulthood and are passed on to the next generation as undernourished girls and women, giving birth to babies with low birth weight(3).

To achieve optimal health, development and survival of infants and young children, all infants should be exclusively breastfed for the first six months followed by introduction of appropriate complementary feeding along with continued breastfeeding for two years or beyond(4).

The Scientific Evidence

Evidence has accumulated in favor of optimal feeding practices for preventing undernutrition. The Ghana study(5) shows that breastfeeding starting within one hour of birth could reduce 22% of all neonatal mortality; this effect is independent of exclusive breastfeeding. This data set is an addition to existing data on child survival published in Lancet in 2003, wherein universalization of exclusive breastfeeding was shown to cut down 13-15% of all child deaths(6).

The primary causes of neonatal deaths are: neonatal infections (52%), asphyxia (20%), and low birth weight (17%). Most of the infectious deaths are from diarrhea and pneumonia(6). A global ecological risk assessment of deaths and years of life lost due to suboptimal breastfeeding among children in the developing world revealed that attributable fractions for deaths due to diarrhoeal disease and lower respiratory tract infections are 55% and 53%, respectively, for the first six months of infancy; 20% and 18%, respectively, for the second six months, and are 20% for all-cause deaths in the second year of life. The authors concluded that globally, as many as 1.45 million lives (117 million years of life) are lost due to suboptimal breastfeeding in developing countries(7).

The recent Lancet series on maternal and child undernutrition(2) has concluded that

1. The relative risk for all cause mortality is 1.48 and 2.85 for predominant (breastfeeding plus water) and partial breastfeeding as compared to exclusive breastfeeding.
2. The relative risk of diarrhea mortality is 2.28 and 4.62 and pneumonia mortality is 1.75 and 2.49 for predominant (breastfeeding plus water) and partial breastfeeding as compared to exclusive breastfeeding.
3. The relative risk for prevalence of diarrhea is 1.26 and 3.04, and for pneumonia is 1.79 and 2.49 for predominant (breastfeeding plus water) and partial breastfeeding as compared to exclusive breastfeeding.

The scientific basis could not be stronger. Further, the recent child growth standards given by WHO are based on the premise that breastfed baby

is the norm for healthy growth among infants and call for creating conditions to achieve optimal breastfeeding *i.e.* beginning breastfeeding within one hour, and exclusive breastfeeding for the first six months. Complementary feeding should begin at six months along with continued breastfeeding(8). These three principles of optimal IYCF – timely initiation of breastfeeding, exclusive breastfeeding for the first six months, and continued breastfeeding with introduction of appropriate and adequate complementary foods from the 7th month onwards – have a critical impact on neonatal, infant, and under-5 mortality. These interventions, more than any other (except ORT), are keys to meet MDG-4, and require special and sustained focus.

IMPROVING BREASTFEEDING RATES

Improving breastfeeding practices requires behavior change, something that does not happen spontaneously and without encouragement and support at the family and community levels. This is recognized in the Global Strategy for Infant and Young Child Feeding, which includes community-based interventions as one of the new operational targets(2).

Studies have also shown that it is possible to improve optimal IYCF through concerted planning and action. A study from Haryana(9) has concluded that use of multiple contacts to counsel on breastfeeding enhanced exclusive breastfeeding to nearly 80%, reduced diarrhea by almost half, and improved uptake of other child health interventions. Input was a 3-day training of frontline workers using the IMNCI module. The group recommended replication to scale up on larger population models. Educational intervention to promote exclusive breastfeeding was found to be feasible, effective, and safe. Features that could have contributed to the success of this intervention were the channels that facilitated contact with the target group soon after birth and throughout the first 6 months of life. Other than primary mothers, home visits by community workers were especially useful in reaching families, since they have an important effect on infant feeding practices. According to them, greater contact with workers in the intervention sites than in the control sites might have promoted adoption of unrelated primary care interventions that have a bearing on diarrhea prevalence or other health outcomes(9).

Another multicentric study(10) also concluded that large scale community-level behavior change programs designed to improve breastfeeding practices are feasible and should be a central component of any child health strategy. These programs were implemented in Bolivia, Ghana, and Madagascar and reached sizable populations. Over 3 to 4 years, timely initiation of breastfeeding (within 1 hour of birth) increased from 56% to 74 % ($P<.001$) in Bolivia, 32% to 40% ($P<0.05$) in Ghana, and 34% to 78% ($P<0.001$) in Madagascar. Marked increase in exclusive breastfeeding of infants 0 to 6 months of age was also documented: from 54% to 65% ($P<0.001$) in Bolivia, 68% to 79% ($P<0.001$) in Ghana, and 46% to 68% ($P<0.001$) in Madagascar. In Ghana and Madagascar, significant results were seen within 1 year of community interventions. The findings show that sizeable improvements in optimal breastfeeding can be achieved at a large scale and within a relatively rapid time frame using the program approach that had partnerships, training, behavior change communication, and community activities.

WHAT NEEDS TO BE DONE?

Breastfeeding education will help prevent problems and women will succeed in breastfeeding since making media announcement and launching awareness programs will only provide information and generate awareness. Given the fact that women's capability to breastfeed is determined by both social and cultural factors, as well as medical and technical factors, mainstreaming IYCF requires both communication for behavior change at all levels of the population, as well as skilled counseling and guidance given to women from the time of childbirth onwards. Mainstreaming of optimal IYCF, inclusion of breastfeeding indicators in outcome evaluation, capacity building for effective improvement in breastfeeding rates and building public awareness on the importance of breastfeeding is crucial to meet MDG-4.

Given the strong impact of breastfeeding on human survival and development, nations must invest on protecting, promoting and supporting breastfeeding, to rapidly reduce their infant mortality and for a long term strategy to improve adult health outcomes. This can happen only if women are supported to carry out optimal breastfeeding practices. This requires skilled counseling by a trained personnel; support to mother in the form of maternity entitlements, mother and baby friendly environment etc; and protection of breastfeeding from the commercial influence.

CONCLUSIONS

Improving child survival is of immense importance for India for it's own sake as well as to fulfill the global desire to achieve the MDGs for nutrition and child survival. Evidence based preventive measures like optimal infant and young child feeding are important tools to achieve these goals. For the Indian Academy of Pediatrics, there is an urgent need to contribute to the ongoing efforts by various partners including NGOs, government and UN agencies. Each member of the Academy must impart the essential service of infant feeding counseling to the mothers and families coming in contact with him/her. This may require sensitization of everyone coming in contact with the mother and counseling on infant feeding by a trained person.

R.K. Agarwal,
President, IAP 2008,
R.K. Hospital,
5/A, Madhuban,
Udaipur 313 001, India.
E-mail: rk_hospital@hotmail.com

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