Undernutrition of children is an important contributor to the deaths of 10.5 million children globally each year. Malnutrition is inter-generational. Girls who are malnourished, especially those who are still children when they become pregnant, often have babies who are too small, and therefore more likely to have poor health throughout the lifecycle into adulthood, which in turn will affect future generations. In spite of the recognized benefits of breastfeeding for mothers and children, breastfeeding practices in Africa remain sub-optimal and enmeshed with issues around the current HIV epidemic and prevention of mother-to-child transmission (PMTCT).

The health and nutrition needs of Africa’s newborns and their mothers are significant and inextricably linked, and optimal child growth and development are fundamental to governments’ efforts to accelerate economic development. Pregnancy and the first two years of life provide a window of opportunity to ensure a healthy start. The Lancet’s 2003 child survival series identified a package of proven nutrition interventions with the potential to avert up to 25 percent of child deaths if implemented at scale. One of these interventions, exclusive breastfeeding, could save up to 1.3 million children worldwide. This essential intervention involves the early initiation of breastfeeding and ensuring that the mother gives only breastmilk, and no other food or fluids, during the first six months of life. We know that “breast is best” and that mothers’ nutrition is essential for the wellbeing of newborns in Africa. We also know what is needed to improve the situation, as outlined in the Global Strategy for Infant and Young Child Feeding. However, progress is slow. How can we ensure that the majority of newborns benefit from this knowledge and that nutrition promotion efforts are better integrated with existing programmes?
Problem

Undernutrition and micronutrient deficiencies resulting from inadequate food and micronutrient intake by women and sub-optimal feeding practices of newborns and infants are associated with health problems throughout the lifecycle. The negative consequences for maternal, newborn, and child health (MNCH) are summarised below:

Effects on mothers: Many women in Africa suffer from chronic undernutrition and micronutrient deficiencies and fail to gain enough weight during pregnancy. The consequences of malnutrition for mothers include increased risk of death, illness, and complications during pregnancy and childbirth, greater susceptibility to infection, reduced activity levels, and lower productivity. Vitamin A and iron deficiencies are common; it is estimated that half of all pregnant women in Africa are anaemic, though this is difficult to measure and compare because of the use of different definitions and insufficient data. When intake of energy and other nutrients does not increase during pregnancy, lactation, and periods of high physical activity, a woman’s own reserves are used, leaving her weakened.

Effects on newborns: Maternal malnutrition increases the risk of stillbirths and newborn deaths, intrauterine growth restriction, low birthweight (LBW), preterm birth, and birth defects. Each year, more than four million LBW babies are born in Africa. These babies are at increased risk of death in the neonatal period, are more likely to be stunted and wasted children, and are at higher risk of child death. Stunting in infancy and early childhood is associated with lower levels of school performance.

Sub-optimal feeding practices during the postnatal period increase the risk of death, illness, and malnutrition. Despite overwhelming evidence of the benefits of exclusive breastfeeding, only about one in three African babies under six months is exclusively breastfed, due to lack of understanding of optimal feeding practices and lack of support from health service providers, community members, and families. Babies who are not exclusively breastfed in the early months have a higher risk of death, especially from infection.

Effects on infants and young children: Trends in childhood malnutrition suggest that the situation in sub-Saharan Africa is static or deteriorating, particularly as HIV/AIDS affects child health and nutrition. Based on projections, the prevalence of underweight children under five years of age in sub-Saharan Africa will increase from 24 million children in 1990 to 43 million in 2015. In other regions of the world, the prevalence of underweight children is expected to decline. Anaemia during pregnancy affects infant iron status, increasing the risk of infection, delaying motor development, and leading to cognitive impairment in early childhood. The prevalence of anaemia remains high in children under five years of age, estimated at 60 percent in sub-Saharan Africa. Vitamin A deficiency also remains a significant concern. Infants with vitamin A-deficiency are at greater risk of growth failure, eye problems, lower resistance to infections, more severe cases of measles, and more frequent and severe episodes of diarrhoea.

Cultural and social factors often contribute to poor nutrition and health outcomes. Incorrect information from family, neighbours, and friends as well as ‘local myths’ may lead to nutrition practices that fail to provide optimal benefits to mothers and newborns. For example, women may avoid certain nutritious foods that are considered taboo during pregnancy, or may ‘eat down’ for fear of having a big baby and a difficult labour. Economic constraints may also lead to energy and nutrient insufficiency, as pregnant women may be required to perform physically demanding work that may be harmful to both mother and baby. Cultural and social factors also impact feeding practices of newborns. Often the first milk, colostrum, is not given to the baby, sometimes due to fears that the yellow milk will give the baby jaundice. On the other hand, some cultural practices promote healthy behaviours. In some cultures, for instance, a woman may receive special foods and be encouraged to rest for several weeks after childbirth.

This chapter covers the package of essential nutrition actions contributing to newborn health, starting with the health and nutrition of the mother and then discussing recommended breastfeeding practices. We then give an overview of opportunities to integrate these practices within existing programmes, the challenges to optimal feeding practices, and practical planning and programmatic steps to accelerate progress.
Mothers and babies form an inseparable biological and social unit, so the health and nutrition of one group cannot be divorced from the health and nutrition of the other. Optimal nutrition for maternal, newborn, and child survival, health, and development can be promoted at key points throughout the lifecycle. The optimal practices are often called Essential Nutrition Actions. The WHO/UNICEF Global Strategy for Infant and Young Child Feeding provides an integrated and comprehensive approach for promoting improved infant feeding practices.

Recent estimates in The Lancet have quantified the costs required for breastfeeding promotion and suggest that the costs are surprisingly low. To reach 99 percent of families with two home visits by peer counselors, the estimated additional cost is around US$124 million for 75 countries with high under-five mortality, including 40 African countries. This translates to an additional three cents per capita in those countries. This is around US$90 per life saved – cheaper even than measles immunisation, which is considered a very low-cost intervention.

### The mother

Essential nutrition actions for the mother that have an effect on the nutritional status of newborn infants are:
- Adequate intake of iron during and after pregnancy
- Adequate intake of vitamin A in the postnatal period
- Adequate intake of iodine

Other interventions affect the nutritional status of the mother, particularly through anaemia prevention. These interventions may be considered in certain settings, which include:
- Treatment of hookworm (with mebendazole) in second or third trimester of pregnancy
- Intermittent preventive treatment for malaria during pregnancy
- Use of insecticide-treated bed nets during pregnancy and after birth
- PMTCT of HIV

### The baby

Essential nutrition actions for newborn health and nutrition are:
- Early initiation of breastfeeding
- Exclusive breastfeeding for the first six months of life
- Feeding newborns in exceptionally difficult circumstances, including LBW or premature babies, those born to HIV-infected women, sick or severely malnourished babies, and those in emergency settings, such as war or natural disaster

### Maternal nutrition

*Improving women’s nutrition will result in healthier mothers and babies*

Years of nutritional neglect perpetuate a cycle of malnutrition and poor health that begins in utero, continues throughout childhood and adolescence, and passes to the next generation with the birth of a malnourished baby. A baby’s low weight at birth is the result of preterm birth (before 37 weeks of gestation), restricted fetal (intrauterine) growth, or both. Many factors relating to the mother, the baby, and the physical environment affect the duration of gestation, the rate of fetal growth, and thus the birthweight and the baby’s future health.

A baby is considered to be LBW if he or she weighs less than 2500 grams at birth and small size is due to either inadequate fetal growth or to preterm birth (born before 37 weeks of gestation), or both. Mothers in deprived socio-economic conditions are more likely to have LBW babies. In these settings, LBW stems primarily from the mother’s undernutrition and poor health, underpinned by poverty, and leading particularly to the high prevalence of infections, such as malaria or syphilis, and pregnancy complications. Physically demanding work during pregnancy also contributes to poor fetal growth and increases the risk of preterm birth.

During pregnancy, all women need more food, a varied diet, and micronutrient supplements. The most commonly used supplements are currently iron/folic acid; however, multiple micronutrient supplements for pregnant women are being tested as a way to enhance maternal micronutrient status and increase birthweight. During lactation, maternal stores of energy, protein, and other nutrients need to be established, conserved, and replenished to ensure both the health of the mother and adequate levels of micronutrients in her breastmilk. Contrary to popular belief, virtually all mothers, unless extremely malnourished, can produce adequate amounts of breastmilk. The primary factors influencing breastmilk production are the frequency of suckling and good attachment to the breast, not the nutritional status of the mother. When the breastfeeding mother is undernourished, it is more beneficial for her and her child as well as safer and less expensive to improve her diet than to expose the infant to the risks associated with breastmilk substitutes. Box III.6.1 lists actions to improve maternal nutrition.
Early and exclusive breastfeeding: Breast is still best

After decades of research on breastfeeding, new findings point to an even greater effectiveness of breastfeeding for saving lives and improving health than previously known. In Africa, the vast majority of babies are breastfed, but sub-optimal breastfeeding practices put them at risk. Even though it is a natural act, breastfeeding is also a learned behaviour. Mothers need skilled support to learn to position the baby and breastfeed optimally. Box III.6.2 summarises the recommended breastfeeding practices for the newborn.

**Breastfeeding early or immediately after birth**

A longitudinal study in Ghana estimated that 22 percent of newborn lives could be saved if breastfeeding were initiated within the first hour. Early initiation of breastfeeding provides warmth, promotes bonding, and helps the mother by reducing the risk of postpartum haemorrhage. During the first days of life, breastfeeding helps to prevent low blood sugar (hypoglycaemia) and low temperature (hypothermia), which are important contributors to newborn deaths. Most newborns are ready to find the nipple and latch on to the breast within the first hour, if provided with immediate skin-to-skin contact. Colostrum, the thick and yellowish or clear breastmilk produced in the first few days, provides the baby with high levels of antibodies, immune cells, vitamin A, and other protective factors.

**Breastfeeding exclusively**

Giving no other foods or liquids, including water, to babies for the first six months could save the lives of up to 1.3 million children each year worldwide. According to a meta-analysis undertaken by a WHO Collaborative Study Team to assess the impact of breastfeeding on infection-specific mortality, the risk of death for babies younger than two months was approximately six times greater for non-breastfed babies as compared to breastfed babies. Edmond and others report a four-fold increase in neonatal mortality risk in babies who are partially rather than exclusively breastfed and a two-fold higher mortality risk in infants who receive pre-lacteal feeds.

Exclusive breastfeeding protects newborns against major causes of death such as sepsis, acute respiratory tract infections, meningitis, and diarrhoea. Exclusive breastfeeding also provides all of the fluid and nutrients needed for optimal growth and development during the first six months. Early and exclusive breastfeeding are associated with increased maternal-infant bonding and the earlier establishment of effective suckling and feeding behaviours. Good attachment at the breast enables an infant to suckle effectively, remove milk efficiently, and stimulate an adequate milk supply. Poor attachment can result in ineffective suckling, which may lead to insufficient breastmilk intake and breast conditions such as breast engorgement, sore and cracked nipples, and mastitis.

**More vulnerable groups require extra support for feeding**

All newborns are vulnerable and require support to enable optimal breastfeeding. However, some groups are even more vulnerable and thus require extra support, including LBW babies, babies born to HIV-infected women, and

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**Box III.6.1 Actions to improve nutrition for pregnant and breastfeeding women**

- At least one extra serving of staple food per day during pregnancy and the equivalent of an extra meal per day during lactation
- Increased daily consumption of fruits and vegetables, animal products, and fortified foods
- Iron/folic acid supplementation or multiple micronutrient supplementation during pregnancy and the first three months postpartum; continued use as needed
- Adequate intake of iodine – use only iodized salt
- Decreased workload and additional rest during pregnancy
- Antimalarial drugs and insecticide treated bednets to prevent anaemia in malaria-endemic areas
- Proper sanitation and footwear to prevent anaemia from hookworm infections where endemic, and routine use of anthelmintics after the first trimester of pregnancy where hookworm prevalence exceeds 20 percent
- Adequate intake of vitamin A in the postnatal period and a high-dose vitamin A supplement taken after childbirth, where this is national policy

Source: Adapted from reference 1
babies born in complex emergency settings. In sub-Saharan Africa, 14 percent of babies are born with LBW. There is strong and consistent evidence that feeding the mother’s own milk to LBW infants, especially preterm babies, is associated with lower incidence of infections and improved neurodevelopment as compared with formula feeding. Box III.6.3 provides guidelines for feeding LBW babies. To reduce the risk of haemorrhagic disease, WHO recommends that all LBW babies receive vitamin K by injection. Small babies, especially babies born too early, can benefit from Kangaroo Mother Care (KMC), or skin-to-skin contact with the mother. KMC can start immediately after birth and has been shown to increase breastfeeding and accelerate weight gain.

Babies born to HIV-infected women present another particularly vulnerable group. Interventions for preventing HIV transmission should start in pregnancy. Safer infant feeding practices can also reduce the risk of mother-to-child transmission of HIV. Each woman needs accurate and unbiased information and counselling on infant feeding options as well as support in selecting and practicing the most appropriate feeding option for her situation. If replacement feeding is acceptable, feasible, affordable, sustainable, and safe (often referred to as AFASS), avoidance of all breastfeeding by HIV-infected mothers is recommended (Figure III.6.1). Otherwise, exclusive breastfeeding is recommended during the first six months of life and should be discontinued as soon as replacement feeding meets these AFASS standards. Special care should be taken to prevent and promptly treat breast conditions to reduce the risk of transmission. (See Section III chapter 7)

Babies are especially vulnerable during complex emergencies. Childhood illnesses and death rates can

**BOX III.6.2 Breast is best: Recommended breastfeeding practices for the newborn**

- Early breastfeeding – initiation of breastfeeding takes place within one hour of birth, with colostrum and continuous skin-to-skin contact
- Exclusive breastfeeding (no other foods or liquids, not even water) for six months
- Good attachment and positioning and prompt treatment of breast conditions such as engorgement, cracked nipples, mastitis, and breast abscesses
- Frequent breastfeeding, day and night (8-12 times per 24 hours and more frequently if needed, especially in the early weeks)
- Continuation of breastfeeding when mother or newborn is ill
- Extra support for feeding more vulnerable newborns, including low birthweight or premature babies, those born to HIV-infected women, sick or severely malnourished babies, and those in emergency settings such as war or natural disaster

Source: Adapted from reference

**BOX III.6.3 Extra care and support for feeding low birthweight (LBW) and preterm babies**

- Most LBW babies who are not preterm (born too early) can breastfeed immediately after birth, but require extra care and support for staying warm and establishing good breastfeeding practices.
- Moderately preterm babies (born around one to two months early or weighing about 1,500 to 2,000 grams) can usually suck, but may tire easily. Mothers should be supported to start expressing breastmilk within the first six hours after childbirth. During the first few weeks, when the baby is learning to breastfeed but cannot complete the feed, the mother can put the baby to the breast, and after the baby tires, the mother can give additional expressed milk using a cup or spoon. The mother can express breastmilk into a sterile/clean container just before the baby sucks. Both the expression and suckling will stimulate continued milk production, and the sucking will provide the baby with the fat-rich hind milk. In health facilities, tube feeding may occasionally be required.
- Very preterm babies (born more than two months too early and often weighing less than 1,500 grams) may not be able to suck efficiently in the first days or weeks and may need nasogastric tube feeding or intravenous fluids. If possible, they should receive care in a referral facility.

Sources: Adapted from references
The reasons for the low exclusive breastfeeding rates worldwide are many and vary from country to country. Common reasons include lack of awareness of the benefits of optimal practices, inadequate health worker training on optimal practices and counselling skills, inadequate access of mothers to those who have received such training, local beliefs and customs, commercial and family pressures, and unsupportive work environments. For example, in one programme in Ghana, it was found that many women were breastfeeding ‘on the run’. Because of competing demands on mothers’ time, at each feed mothers gave a little bit of milk from both breasts, so children were not suckling enough to get the rich hind milk. These babies remained hungry and mothers were therefore tempted to give other foods.24

Current coverage and trends

Nearly all babies in Africa are breastfed, but feeding practices are sub-optimal for the majority compared to the optimal practices of early and exclusive breastfeeding. Early breastfeeding, within the first hour of birth, is not the norm. This is a major missed opportunity for breastfeeding in Africa. While 96 percent of babies are breastfed, only 44 percent of babies are put to the breast within one hour of birth, according to Demographic and Health Survey (DHS) data from 29 African countries. Rates ranged from a low of about 23 percent in Senegal to a high of 81 percent in Namibia.

Exclusive breastfeeding, measured as infants less than six months old who received only breastmilk in the previous 24 hours, is even lower. Fewer than one in three babies in sub-Saharan Africa is exclusively breastfed* (Figure III.6.2). Exclusive breastfeeding rates in the countries of western and central Africa are the lowest of all developing countries.

The reasons for the low exclusive breastfeeding rates worldwide are many and vary from country to country. Common reasons include lack of awareness of the benefits of optimal practices, inadequate health worker training on optimal practices and counselling skills, inadequate access of mothers to those who have received such training, local beliefs and customs, commercial and family pressures, and unsupportive work environments. For example, in one programme in Ghana, it was found that many women were breastfeeding ‘on the run’. Because of competing demands on mothers’ time, at each feed mothers gave a little bit of milk from both breasts, so children were not suckling enough to get the rich hind milk. These babies remained hungry and mothers were therefore tempted to give other foods.24

*If replacement feeding becomes acceptable, feasible, affordable, sustainable, and safe (AFASS) during the first six months, the HIV-positive woman should move from exclusive breastfeeding to replacement feeding, avoiding an abrupt change.
Source: Adapted from reference23

FIGURE III.6.1 Infant feeding options for HIV-positive women in the first six months

FIGURE III.6.2 Room for improvement: Missed opportunities for early and exclusive breastfeeding in sub-Saharan Africa

Source: Demographic and Health Surveys, see data notes on page 226 for more details. See country profiles in Section V for country-specific data.
While exclusive breastfeeding rates remain low, a number of countries have made significant progress (Figure III.6.3). Within a five to eight year period, the rates increased by 20 to 40 percentage points in Benin, Ghana, Madagascar, Mali, Zambia, and Zimbabwe, according to DHS data.

Opportunities to strengthen and integrate nutrition with MNCH programmes

There are opportunities to provide all pregnant women and their newborns with essential nutrition actions through existing nutrition and health care services as well as other MNCH programmes. Within MNCH, nutrition support can take place throughout the continuum of care in antenatal services, safe motherhood and reproductive health activities, integrated management of childhood illness (IMCI), and programmes to prevent mother-to-child transmission of HIV. Opportunities outside of the health sector should also be seized. For example, nutrition messages have been successfully integrated into the meetings of women’s credit groups that provide ‘credit with education’ and have led to improved breastfeeding behaviours and nutrition outcomes.25

The overall strategy should strive to use all programme opportunities to the maximum extent possible to deliver the right nutrition support at the right time to the right group. Information, support, and confidence building contribute to the establishment and maintenance of optimal breastfeeding practices. These require trained breastfeeding counsellors and an effective behaviour change communication approach with targeted, concise messages disseminated frequently and widely through appropriate media. Messages delivered through multiple channels, for instance, to the policy maker, health care provider, community leader, and radio journalist, should be harmonised.

Routine health services offer opportunities to provide support for optimal feeding practices for newborns and adequate nutritional care for pregnant women and new mothers.

- **During pregnancy** women can be counselled on adequate food intake to maintain healthy levels of weight gain, food diversity to improve vitamin and mineral intake, and the control and treatment of both malaria and helminth infections to prevent anaemia. Pregnant women can also receive counselling on micronutrient supplementation and early and exclusive breastfeeding.

- **During labour** hydration and continuous physical, emotional, and informational support can reduce the need for medical interventions that can make the baby drowsy and less likely to initiate breastfeeding immediately. This support can increase a woman’s confidence in her ability to breastfeed and care for her baby.

- **During and immediately after childbirth** those attending the mother should offer counselling and support for early and exclusive breastfeeding, correct positioning and attachment. Several studies suggest that allowing a brief interval of time (30-120 seconds) to pass between childbirth and clamping or tying the umbilical cord can increase the transfer of blood and iron to the newborn and reduce the risk of anaemia in infancy.26 However, international guidelines on the recommended timing of cord clamping are currently under review. A high-dose vitamin A supplement should also be given to the mother after childbirth, where this is policy.

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**Note:** Among infants under six months of age at the time of the survey, the percentage who received only breastmilk in the 24 hours preceding the interview. Source: Demographic and Health Surveys (DHS) from 24 countries with two DHS, see data notes on page 226 for more details.
Throughout the postnatal/neonatal period contacts with new mothers provide an opportunity to counsel on frequent and exclusive breastfeeding, observe the newborn for correct positioning and attachment, resolve problems, and discuss actions related to maternal nutrition during lactation, particularly eating more each day, ensuring diet diversity, and continuing micronutrient supplementation as indicated.

These opportunities are missed for a variety of reasons, including inadequate competencies to provide the support needed, lack of clear protocols for service providers (e.g. lack of ‘job aids’), lack of stock and key supplies, or simply an overloaded health system resulting in sub-standard health service delivery.

Mozambique: A study in 10 facilities in Manica Province assessed whether health providers used their contacts with mothers for nutritional counselling. Of the 39 women observed during postnatal consultations, only three were asked if they were exclusively breastfeeding. Opportunities to discuss exclusive breastfeeding were again missed during child consultations.27

Ethiopia: Although 79 percent of pregnant women in an urban/peri-urban area attended at least one antenatal visit, only 22 percent received iron/folic acid supplements, 45 percent were tested for anaemia, and 33 percent were counselled on exclusive breastfeeding.28

Opportunities in health facilities
One major strategy to address early infant feeding practices at the health facility level is the Baby-Friendly Hospital Initiative, supported by WHO and UNICEF and launched in 1991, to ensure that opportunities were not missed to support breastfeeding during antenatal and postnatal care. A maternity facility can be certified as “baby-friendly” if it adheres to the Ten Steps to Successful Breastfeeding, listed in Box III.6.4, and if it implements relevant provisions of the International Code of Marketing of Breast-milk Substitutes.

Opportunities in communities
Many African women have limited contact with health services. Strengthening community-based activities to increase skilled and timely support for maternal nutrition and breastfeeding is essential. Community-based activities include education and support from skilled birth attendants and existing community groups, community mobilisation, traditional and mass media, and home visits.

Existing community groups. Mother-to-mother support groups, mothers’ clubs, and social, religious, and credit groups can be avenues for breastfeeding information and support. In the Gambia, 12 communities identified five women and two men in each community to be trained and certified as Village Support Groups on infant feeding. These groups disseminated information through home visits, village meetings, ceremonies, songs, and dances. Early initiation of, and exclusive breastfeeding became the norm. In addition, the communities constructed rest

**BOX III.6.4 Being Baby-Friendly**

To be declared baby-friendly, a facility or hospital must pass these ten steps for successful breastfeeding:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff
2. Train all health care staff in skills necessary to implement this policy
3. Inform all pregnant women about the benefits and management of breastfeeding
4. Help mothers initiate breastfeeding within one half-hour of birth
5. Show mothers how to breastfeed and maintain lactation, even if they should be separated from their infants
6. Give newborn infants no food or drink other than breastmilk, unless medically indicated
7. Practice rooming in – that is, allow mothers and infants to remain together 24 hours a day
8. Encourage breastfeeding on demand
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants
10. Foster the establishment of breastfeeding support groups, and refer mothers to them on discharge from the hospital or clinic

Source: Adapted from reference29
houses near the fields to enable mothers who were farmers to breastfeed their infants at work.30

- **Community mobilisation events.** Songs, drama, storytelling, puppet shows, baby shows, health fairs, World Breastfeeding Week, and community festivals are examples of community mobilisation events to promote breastfeeding and better nutrition practices for pregnant and lactating women. They are entertaining ways of sharing information and celebrating accomplishments, while involving local officials, health volunteers, and families.

- **Mass media.** Mass media can be used to reinforce messages communicated through print materials and interpersonal communications as well as raise awareness, extend reach, and create a supportive social environment for behaviour change. Local radio broadcasts reach a large proportion of the population. In Madagascar, a popular singer wrote songs with messages on early and exclusive breastfeeding. They were sung at concerts, played on the radio, and listened to on cassettes provided to taxi and bus drivers.

- **Home visits by peer counsellors and community health workers.** Home visits within the first days and weeks can improve the chances for successful breastfeeding. During those first days, doubts and breastfeeding problems, such as engorged breasts that often happen approximately three to five days after birth, can discourage a mother. A home visitor in the early days, however, can reinforce good breastfeeding practices and reassure the mother. Several studies have examined the effect of peer and lay counsellors on exclusive breastfeeding.31 In general, mothers who are visited more frequently are more likely to adopt optimal practices than those visited less often or not at all.32

**Challenges**

The *Global Strategy for Infant and Young Child Feeding* identifies several challenges to optimal feeding practices for newborns. These challenges need to be addressed in order to improve breastfeeding rates in particular.

**Strengthening nutritional support services in health systems**

**Awareness of decision makers at all levels.** Decision makers think, “Almost all women breastfeed, so what’s the problem?” Policy makers and programme managers must understand the social, human, and economic costs of sub-optimal breastfeeding practices; otherwise, an unsupportive policy environment leads to under investment in programmes that protect and promote optimal breastfeeding. Health workers, volunteer organisations, community leaders, and family members must also recognize and promote the importance of improving women’s nutrition and breastfeeding practices.

**Support for health providers.** Most women report that health care providers are their primary source of information on infant feeding. They should therefore be trained and equipped to support maternal nutrition and breastfeeding as well as give appropriate, quality care at home and in facilities. Too often, this is not the case: appropriate topics are not covered adequately in pre-service education. To counsel mothers on breastfeeding successfully, providers need to be competent in lactation management, breastfeeding counselling skills, and infant feeding counselling in the context of HIV, where relevant. Principles of the Baby-Friendly Hospital Initiative should become standard clinical practice and be integrated into pre-service education and continuing education. The curriculum of health care providers should also stay technically up-to-date in nutrition and include training on counselling and negotiation skills. Some countries, including Ethiopia, Ghana, and Madagascar, have addressed these gaps by strengthening pre-service curriculum in all major medical and para-medical training institutions based on the essential nutrition actions.

**Number and quality of baby-friendly hospitals and health facilities.** Staff turnover, lack of resources for repeated in-service training, competing health issues, and confusion and concerns regarding HIV have resulted in declining baby-friendly practices in many facilities that had been awarded baby-friendly status. The challenge is to sustain the quality of care in baby-friendly hospitals and extend the initiative to include activities that go beyond the immediate postnatal period to provide breastfeeding support in the home and community.

**Special training for health care providers for feeding exceptionally vulnerable babies.** Small babies, especially preterm babies, need extra support to enable breastfeeding. Current guidelines for HIV and infant feeding as well as training courses and counselling materials (see programme resources listed at the end of this section) need to reach the decision makers, managers, supervisors and health workers implementing these programmes in African countries.

**Accessing the hard-to-reach groups**

**First time mothers and adolescent girls.** Approximately one-half of African women experience their first pregnancy by 19 years of age. These mothers are at higher risk of giving birth to premature and LBW babies; thus, they require added support to initiate and maintain good breastfeeding practices and manage special feeding situations. Establishing early healthy feeding and care practices will positively influence later care. This group also needs practical and emotional support to protect their own nutrition and health, including family planning.

**Women who give birth at home.** Nearly 60 percent of women in sub-Saharan Africa do not have a skilled
attendant present when they give birth. An assessment of care and management of newborns in 14 health facilities in Africa found that about 80 percent of women visited the antenatal clinic at least once, but only 30 percent returned to give birth in a facility. This underscores the importance of community-based services and programmes to increase early and exclusive breastfeeding and sustain good feeding practices in the home.

Mother and babies living in difficult circumstances. Women and babies in refugee and emergency settings are especially at risk of infections and illness and often have less access to support for breastfeeding and nutrition.

Linking health facilities with communities. Step Ten of the Baby-Friendly Hospital Initiative – community outreach – is the least developed of the Ten Steps (see Box III.6.4). Few countries actively implement this critical component, and the referral process between the community and the health facility is often weak.

Overcoming family and community obstacles. Many societies consider colostrum “dirty,” so mothers discard it and give their newborns pre-lacteal feeds such as butter, sugar water, and herbal concoctions. When they do start breastfeeding, they often continue to give liquids such as tea, sugar water, and juice, not realising that breastmilk is 88 percent water and meets a baby’s water requirements, even in hot climates.

Qualitative research can identify why sub-optimal nutrition and infant feeding practices occur. Knowledge of local enablers and barriers to good nutrition practices should guide the development of messages and strategies for any programme designed to reach specific audiences, as illustrated in Box III.6.5.

BOX III.6.5 Addressing barriers to early initiation of breastfeeding

The Ghana Health Service and the USAID-funded LINKAGES Project worked with a network of government, international, nongovernmental, and institutional partners to improve infant and young child nutrition in northern Ghana. Giving water to the baby at birth was a deeply ingrained practice, and non-exclusive breastfeeding was the norm. Messages were designed to appeal to different audiences (pregnant women, mothers of children younger than two years, fathers, and grandmothers):

- Mothers, put your baby to the breast immediately after childbirth to ensure a healthy beginning for both you and your child. This will help reduce bleeding and protect your child from infection. The yellow milk is God’s way of welcoming your baby into the world.
- Fathers, a wise father encourages exclusive breastfeeding so his baby grows up to be strong, healthy, and intelligent.
- Grandmothers, breastmilk has everything your grandchild needs to satisfy and quench the baby’s hunger and thirst.

The project, reaching 3.5 million people, developed a set of counselling cards for use with pregnant women and mothers and another set for grandmothers and traditional birth attendants. Messages for fathers were placed on posters, t-shirts, and calendars. Health providers and members of mothers’ clubs were trained to communicate key messages to these various audiences. Major improvements were seen from 2000 to 2003 in timely initiation of breastfeeding, from 32 percent to 40 percent, and in exclusive breastfeeding, from 68 percent to 79 percent.

Source: Adapted from reference 34

Practical steps to strengthen and integrate essential nutrition actions within MNCH programmes

The Global Strategy for Infant and Young Child Feeding suggests actions to protect, promote, and support appropriate feeding practices. Other documents, such as the HIV and Infant Feeding Framework for Priority Action and the International Code of Marketing of Breast-milk Substitutes provide important policies regarding infant feeding.

Planning Steps

The WHO/UNICEF Planning Guide for National Implementation of the Global Strategy for Infant and Young Child Feeding proposes the following six-step planning process to develop a country-specific strategy:

1. Identify and orientate key stakeholders and prepare for developing a comprehensive strategy.
2. Assess and analyse the local situation.
3. Define preliminary national objectives.
4. Identify and prioritise actions to be taken.
5. Develop a national strategy.
6. Develop a national plan of action.
7. Implement and monitor the plan.

The Global Strategy for Infant and Young Child Feeding is being implemented in more than 20 countries in the African region by governments in coordination with a variety of partners. Lessons learned from large-scale country programmes that have improved overall nutrition practices can guide programme implementation. The following are some important steps:

Review existing nutrition policy and strengthen if necessary. International policy guidelines on the nutrition actions needed for women and young children...
should serve as a technical basis for programme managers in planning, implementing, and scaling up programmes to improve the nutrition of women and young children, including newborns.

**Create and cultivate partnerships.** A network of partners involving government leaders, NGOs, private partners, universities, development agencies, and print and radio media personalities can facilitate rapid scale up and spread key messages to a wider audience.

**Apply a behaviour change strategy at all levels.** Harmonised messages across all programmes and standardised indicators provide a common focus and a shared framework. Effective communication channels, including mass media and community mobilisation activities, should be used to saturate mothers and communities with a few key nutrition messages.

**Take advantage of multiple programme opportunities and contact points.** Existing programmes within and outside the health sector can provide many opportunities to reach pregnant and lactating women and newborns. Integration of infant and young child feeding practices, counselling, supervision, and training of health workers should be sought in programmes such as immunisation, community integrated management of childhood illnesses (C-IMCI), early childhood development, family planning, and integrated management of pregnancy and childbirth. (See Section III chapters 5 and 9)

**Build the capacity of service providers.** Service providers require training in interpersonal communication skills to counsel and negotiate with women on nutrition and infant feeding. Short-term competency based training in nutrition and communication skills can be integrated into existing programmes. A variety of training approaches and tools currently exists. (See programme resources at the end of Section III.)

**Improve logistics support for service delivery.** Necessary supplies for adopting some of the recommended nutrition practices should be available and accessible. These supplies include iron/folic acid supplements, vitamin A capsules, antihelminthics, malaria drugs, insecticide-treated bed nets, and communication materials. The need for integrated supply systems for MNCH programmes is discussed further in Section IV.

**Monitor and evaluate key indicators for better decision-making.** Once key indicators are chosen and linkages are established, monitoring and evaluation of nutrition and other MNCH outcomes is crucial. These indicators should be included in existing surveillance mechanisms and reporting structures.

A national approach in Madagascar used these steps to scale up essential nutrition actions, which resulted in change at scale (Box III.6.6).

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**BOX III.6.6 Scaling up essential nutrition actions in Madagascar**

In 1997, an inter-sectoral nutrition coalition was created in Madagascar. The Groupe d’Actions Inter-Sectoriel en Nutrition (GAIN), chaired by the Nutrition Division of the Ministry of Health, was formed and received support from USAID, UNICEF, and the World Bank. GAIN expanded to more than 75 representatives from 50 organizations, including government ministries (health, finance, education, agriculture, trade, population) and representatives from the donor community and nongovernmental organizations. Key aspects of the scale up strategy included:

* **Vision** A shared vision to achieve scale was established from the beginning by GAIN members

* **Wide coverage** Many partners, especially big field programmes with wide reach (e.g. USAID bilateral project, UNICEF-supported area based programme, and World Bank Secaline project) participated, and multiple programmes served as opportunities for entry points

* **Specificity** Initial focus was placed on optimal breastfeeding practices, but within the overall context of essential nutrition actions

* **Harmonisation** Partners reached consensus so that everyone was “singing the same song to the same tune”

* **Support to all levels** Groups at the national level (policy and protocol development and pre-service curricula), regional/district levels (the Baby-Friendly Hospital Initiative, capacity development of health staff), and community level (training of primary level health service providers, NGO staff, and community members) received support
• **Short-term skills-based training** Short-term skills-based training modules included counselling and negotiation skills that were easily incorporated into child survival, reproductive health, and nutrition programmes.

• **Behaviour change** A behaviour change strategy was used at all levels and particularly targeted mothers to achieve optimal nutrition practices often based on small, do-able actions known to make a difference. Key messages were also reinforced by songs, jingles, and skits delivered through radio and television broadcasts, cassettes provided to bus and taxi drivers, and news print (newspapers and simple village newsletters).

• **Community volunteers** Members of women’s groups were trained as community nutrition volunteers to support health workers stationed at primary facilities.

• **Monitoring and evaluation** Key indicators and results were collected annually and shared with all partners.

This approach was implemented in programme sites, reaching 6.3 million people out of a total population of 19 million. Over a four-year period, timely initiation of breastfeeding increased in programme areas from 34 percent to 78 percent, and exclusive breastfeeding increased from 46 percent to 68 percent. At the national level between 1997 and 2003, early initiation of breastfeeding rose from 34 percent to 62 percent, and exclusive breastfeeding increased from 47 percent to 67 percent, as measured by the Madagascar Demographic Health Survey.

Source: Adapted from reference35

**Conclusion**

Breastfeeding and other nutrition actions contribute to better health throughout the lifecycle. Newborns survive, children thrive and grow, and well-nourished women have healthy pregnancies and live more productive lives. The cost of promoting breastfeeding through two home visits is certainly affordable in high-mortality countries.11 Efforts should focus on seizing opportunities for nutrition promotion within existing programmes. This means emphasising partnerships, harmonising field approaches for scaling up, and addressing newborn health within a continuum of women’s health, newborn care, and child survival, growth, and development.

**Priority actions for strengthening nutrition actions**

• Review existing nutrition policy in the context of the Infant and Young Child Feeding Strategy and if necessary, strengthen policies and the enforcement of supportive legal frameworks, such as the International Code of Marketing of Breast-milk Substitutes.

• Create and cultivate partnerships and harmonise messages.

• Apply a behaviour change strategy at all levels: household, community, health facility, district and national.

• Use multiple programme opportunities to extend coverage to pregnant and lactating women and newborns.

  • Build capacity through short-term competency based training and strengthening pre-service education.

  • Improve logistics support for delivery, especially the availability of micronutrient supplements.

  • Improve data collection for decision making.