Pneumonia: The forgotten killer of children

Pneumonia kills more children than any other disease – more than AIDS, malaria and measles combined. It is a major cause of child deaths in every region. Children with pneumonia may exhibit a wide range of symptoms, depending on age and cause of the infection. Common symptoms include rapid or difficult breathing, cough, fever, chills, headaches, loss of appetite and wheezing. In young infants, severe cases of pneumonia can cause convulsions, hypothermia, lethargy and feeding problems.

In childhood, pneumonia and malaria have major overlaps in terms of symptoms, the requirements for their effective management and the feasibility of providing care in the community. In effect, especially in very young children, it may be impossible to tell whether a high fever, coughing and fast breathing is evidence of either pneumonia or malaria, and in such cases children often receive treatment for both. Once a child develops pneumonia, a caregiver must recognize the symptoms and seek appropriate care immediately.

Healthy children have natural defenses that protect their lungs from the pathogens that cause pneumonia. Undernourished children, particularly those who are not exclusively breastfed or have inadequate zinc intake, or those with compromised immune systems, run a higher risk of developing pneumonia. Children suffering from other illnesses, such as measles, or those living with HIV, are more likely to develop pneumonia. Environmental factors, such as living in crowded homes and being exposed to parental smoking or indoor air pollution, may also play a role in increasing children’s susceptibility to pneumonia and its consequences.

Prevention is as important as cure in reducing child deaths from pneumonia. The key preventive measures for children are adequate nutrition (including exclusive breastfeeding, vitamin A supplementation and zinc intake), reduced indoor air pollution and increased immunization rates with vaccines that help prevent children from developing infections that directly cause pneumonia, such as Haemophilus influenzae type b (Hib), and with those immunizations that prevent infections that can lead to pneumonia as a complication (e.g., measles and pertussis). Vaccines to protect against Streptococcus pneumoniae – the most common cause of severe pneumonia among children in the developing world – will be increasingly becoming available for infants and young children.

Since a large proportion of severe pneumonia cases in children of the developing world are bacterial in origin – mostly Streptococcus pneumoniae or Haemophilus influenzae – they can be effectively treated using inexpensive antibiotics at home, provided that families and caregivers follow the advice they receive and treat the child correctly, including returning for help as necessary. If these conditions are in place, evidence from across the developing world suggests that community-based management of pneumonia can be very effective. A meta-analysis of results from nine studies in seven countries, including the United Republic of Tanzania, that investigated the impact of community-based case management of pneumonia revealed substantial reductions not only in pneumonia mortality but in child mortality more generally. Trials resulted in a reduction of mortality of 26 per cent and a 37 per cent reduction in mortality from pneumonia.

See References, page 104.

Progress towards the other health-related MDGs is mixed

Although advancements on all eight Millennium Development Goals are important to the survival and well-being of children, MDGs 1, 5, 6, 7 and 8, as well as MDG 4, have targets that directly affect children’s health. Progress in the areas targeted by these goals could have a dramatic effect on the lives and prospects of children.

Enhancing nutritional status (MDG 1)

Undernutrition is the main underlying factor for up to half of all deaths of children under five. Improving nutrition and achieving MDG 1, which aims to reduce poverty and hunger, would help avert child deaths from diarrhea, pneumonia, malaria, HIV and measles, and it would reduce neonatal mortality. In other words, improving maternal and child nutrition is a prerequisite for achieving MDG 4.

The standard indicators used to measure MDG 1, however, do not reveal the full extent of undernutrition among children in the developing world. One of the indicators focuses on hunger, as measured by the proportion of children under five who are underweight. But that captures only one dimension of nutrition. A child may die from a weakened immune system when vitamin A is lacking, for example, without being apparently hungry or underweight.

Adequate nutrition needs to begin during a mother’s pregnancy and continue when a child is born. Immediate and exclusive breastfeeding is the best source of nutrition for a child, providing physical warmth and strengthening immune systems. Micronutrients such as iron, vitamin A and iodine can also have a profound impact on a child’s development and a mother’s health. In cases of severe acute undernutrition, specific therapeutic foods are advised. Although these remedies are low-cost and highly effective, millions of children and mothers still do not have access to or are not adopting them. More than 30 per cent of households in the developing world do not consume iodized salt. More than 60 per cent of infants were not exclusively breastfed during the first six months of life, and 28 per cent lacked full coverage (two doses) of vitamin A supplementation in 2005.

Improving maternal health (MDG 5)

To reduce child mortality, improving the health of pregnant women and new mothers is critical. More than half a million women die each year due to pregnancy-related causes, and many more suffer debilitating long-term effects, such as fistula, that could be easily avoided through adequate maternal care. Furthermore, improving maternal health is vitally important for a child’s prospects of survival. Evidence shows that a motherless child is more likely to die before reaching age two than infants whose mothers survive.6

Improving the health and nutrition of mothers-to-be and providing quality reproductive health services are pivotal to addressing many underlying causes of child mortality. Poor nutrition in women can result in preterm births and babies with low weight at birth. Visits to, or from, a trained health-care provider during pregnancy can help avert early deliveries and neonatal tetanus, which is almost always fatal. A skilled