Tackling pneumonia and diarrhoea: the deadliest diseases for the world's poorest children

On June 8, 2012, UNICEF released a report, *Pneumonia and diarrhoea: tackling the deadliest diseases for the world's poorest children,*[1] that presents a compelling argument for greater action for all children, but especially the most vulnerable, on these leading causes of child deaths. Pneumonia and diarrhoea together account for nearly a third (29%) of all deaths among children younger than 5 years, a loss of more than 2 million lives each year.[2]

This staggering toll of childhood death is concentrated in the world's poorest regions and countries.[1] Treatment of pneumonia and diarrhoea remains unconscionably low, especially among the poor who are also less likely than the wealthy to benefit from preventive measures.[1] The UNICEF report highlights the tremendous potential to narrow the child survival gap both across and within countries by focusing greater commitment, attention, and funding on these leading causes of child deaths. This report follows a 2010 UNICEF study[3] that indicated equity-focused approaches to child survival are right in principle and in practice too.

The 2012 UNICEF report underscores what has long been known: coverage of essential interventions for pneumonia and diarrhoea is often much lower in the world's poorest countries than in high-income countries. These countries bear a disproportionately large share of child deaths, which are often related to common infections, notably pneumonia and diarrhoea.[2,4] The potential for saving children's lives is great if proven, cost-effective interventions for pneumonia and diarrhoea can be scaled up to reach the most disadvantaged children who are currently missing out.[1,5] The report shows that by 2015, more than 2 million children's lives could be saved in the 75 countries with the highest mortality burden if each country's entire population of children under 5 years simply attained coverage already achieved by the wealthiest in their societies. Additional modelling work for Bangladesh indicates nearly six times as many children's lives could be saved in the poorest households compared with the richest if key pneumonia and diarrhoea interventions are scaled up to near universal levels.[1]

UNICEF's comprehensive assessment of progress in childhood pneumonia and diarrhoea[1] provides powerful results that should motivate the world to recommit to tackling these two diseases. Its findings point to some impressive successes mixed with lost opportunities. First, new vaccines are available against the major causes of pneumonia and diarrhoea. Most low-income countries have introduced *Haemophilus influenzae* type b (Hib) vaccines to nearly close the gap between rich and poor countries in terms of vaccine introduction. Pneumococcal conjugate vaccines are becoming increasingly available in low-income countries, and access to rotavirus vaccine for diarrhoea seems likely to improve in the near future.[6] Yet disparities in access to vaccines within countries could substantially reduce their impact, and is an ongoing concern for established vaccines, such as vaccines containing measles and pertussis.

Second, treatment coverage for childhood pneumonia and diarrhoea remains low with no real change

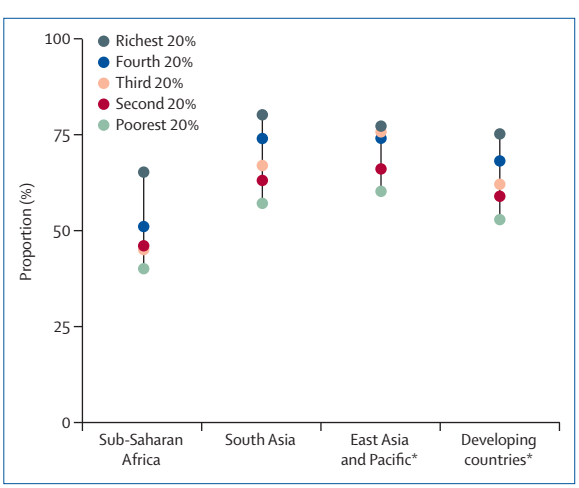

Figure: **Children under 5 years with suspected pneumonia who are taken to an appropriate health-care provider or facility by household wealth quintile and region, 2006–11 (%)**

*Excludes China. Estimates are based on a subset of 36 countries with available data for 2006–11, covering 62% of the under 5 population in developing countries (excluding China, for which comparable data are not available) and at least 50% of the under 5 population in each region. Data coverage was insufficient to calculate the regional average for Central and Eastern Europe and the Commonwealth of Independent States, Latin America and the Caribbean, Middle East and North Africa, and industrialised countries. Data are from UNICEF global databases 2012, based on Multiple Indicator Cluster Surveys, Demographic and Health Surveys, and other national surveys.

For **UNICEF data** see http://www.childinfo.org

during the past decade: the poorest children in the poorest countries are least likely to receive treatment (figure). The report found that a third (34%) of children with diarrhoea in developing countries are given solutions made of oral rehydration salts—one of the most cost-effective and life-saving child survival interventions available.[7] Even fewer children are given zinc for treatment of diarrhoea.[1] Appropriate health-care seeking for children with symptoms of pneumonia remains low in developing countries and less than a third (29%) of these children receive antibiotics.[1]

Finally, the report emphasises that exclusive breast-feeding for the first 6 months of life is vital to reduce deaths from pneumonia and diarrhoea. Yet currently fewer than four in ten (37%) infants across the developing world are exclusively breastfed. Another key issue is drinking water. Although the Millennium Development Goal drinking water target was met in 2010,[8] more than 780 million people are still without improved drinking water sources and 2·5 billion people are without improved sanitation facilities, mostly in the poorest households and in rural areas. This is important because diarrhoeal deaths are closely linked to unsafe drinking water, inadequate sanitation, and poor hygiene.[9]

It is time for pneumonia and diarrhoea to assume a more prominent position on the child survival agenda given their substantial contributions to child mortality. We know what needs to be done. Action plans for pneumonia and diarrhoea have been set out by UNICEF, WHO, and partners.[10,11] They include proven interventions from across different sectors—health, nutrition, water and sanitation—that are available for immediate scale-up. Indeed, many interventions for pneumonia and diarrhoea are identical, and could be addressed in a coordinated manner.[1] There are also innovations in products, strategies, and approaches that can help accelerate progress, such as child-friendly dispersible zinc and amoxicillin tablets in appropriate dispensing packs; flavoured oral rehydration salts in various packet sizes more suitable for children; training and deployment of community health workers to provide care closer to where the most vulnerable live; and use of mobile technologies to increase efficiency in service delivery.[12]

A global partnership that currently includes UNICEF, WHO, Aga Khan University, Boston University School of Public Health, the Bill & Melinda Gates Foundation, Johns Hopkins Bloomberg School of Public Health, International Centre for Diarrhoeal Disease Research, Bangladesh, and others is being formed to set out an integrated vision for pneumonia and diarrhoea control, identify evidence gaps for future research, and support global advocacy efforts. A coordinated global action plan for pneumonia and diarrhoea control is planned for release in early 2013. The UNICEF report is part of our contribution to this major global partnership and provides the evidence to closely link pneumonia and diarrhoea control to equity in child survival strategies. Great strides in child survival can be achieved when sound strategies, collaborative efforts, and adequate financing come together.

Geeta Rao Gupta
UNICEF, New York, NY 10017, USA
hnewby@unicef.org

I declare that I have no conflicts of interest. GRG is Deputy Executive Director (Programmes) for UNICEF.

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