

Interim estimates of global under-five diarrhea and pneumonia deaths in 2011

Li Liu, Jamie Perin, Christa Fisher-Walker, Robert E. Black

The global, regional and national estimates of under-five diarrhea and pneumonia deaths are routinely published by the Child Health Epidemiology Reference Group (CHERG) and the most recent estimates are for year 2010.(1-3) CHERG is currently updating the estimation process to produce global and regional figures for year 2011. In the meantime, the Inter-agency Group for Child Mortality Estimation (IGME) has produced the total number of under-five deaths (envelopes) for year 2011, which is estimated to be 6.9 million at the global level.(4) While the updated CHERG estimates applying the IGME envelopes for 2011 will become available in the near future, there is a need to produce a set of interim estimates for diarrhea and pneumonia deaths for year 2011.

The interim estimates of the number of deaths due to diarrhea in 2011 for children under five years of age was estimated by applying the country-level cause-specific fractions of diarrhea in 2010 to the country-specific envelopes in 2011 for the 193 WHO member states. The global and regional numbers of diarrhea deaths for year 2011 were then produced by aggregating country-level estimates. The global total number of diarrhea deaths is estimated to be 712,000 in 2011 (95% uncertainty range (UR): 491,076-1,049,000). The interim estimates of the number of under-five pneumonia deaths in 2011 were produced in a similar fashion with the global total being 1,257,000 (95% UR: 1,053,000-1,483,000). It is cautioned that directly applying the 2010 cause-specific fractions due to the two conditions to the 2011 envelopes at the global level would only produce rough approximation to these interim estimates. For final estimates, please refer to the CHERG forthcoming update.

Reference List

- (1) Black RE, Cousens S, Johnson H, Lawn JE, Rudan I, Bassani DG et al. Global, Regional and National Causes of Child Mortality, 2008. *Lancet* 2010;375(9730):1969-87.
- (2) Bryce J, Boschi-Pinto C, Shibuya K, Black RE. WHO estimates of the causes of death in children. *Lancet* 2005 March 26;365(9465):1147-52.
- (3) Liu L, Johnson HL, Cousens S, Perin J, Scott S, Lawn JE et al. Global, regional, and national causes of child mortality: an updated systematic analysis for 2010 with time trends since 2000. *Lancet* 2012 June 9;379(9832):2151-61.
- (4) The Inter-Agency Group for Child Mortality Estimation (IGME). Estimates of under-five mortality rates by country, the 2012 release. www.childmortality.org (accessed November 30, 2012); 2012.