

# Global, national burden of diseases, injuries among children and adolescents

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A new report examines global and national trends in the fatal and nonfatal burden of diseases and injuries among children and adolescents in 188 countries based on results from the Global Burden of Disease 2013 study, according to an article published online by *JAMA Pediatrics*.

Data for estimates in the report by the Global Burden of Disease Pediatrics Collaboration come from vital records registration, [verbal autopsy](#) studies, maternal and child death surveillance and other sources.

Among the key findings:

- Globally, there were 7.7 million deaths among children and adolescents in 2013. Of those, nearly 6.3 million deaths occurred in children younger than 5, nearly a half million deaths among children ages 5 to 9 and nearly 1 million deaths among adolescents ages 10 to 19.
- The leading causes of death among children younger than 5 globally in 2013 were lower respiratory tract infections, preterm birth complications, neonatal encephalopathy following birth trauma and asphyxia, malaria and diarrheal deaths. These five causes accounted for 3.4 million deaths or 54 percent of all deaths among children younger than 5.
- Among older children ages 5 to 9, the most common cause of death in 2013 was diarrheal disease, followed by lower respiratory tract infections, road injuries, intestinal infectious diseases (mainly typhoid and paratyphoid) and malaria. These

five causes accounted for 181,000 deaths or 39 percent of deaths among children 5 to 9.

- Among adolescents 10 to 19, the leading cause of death in 2013 was road injuries, followed by HIV/AIDS, self-harm, drowning and intestinal infectious diseases. These five leading causes accounted for 34 percent of all deaths in this age group.
- Half of the world's diarrheal deaths among children and adolescents occurred in just five countries: India, Democratic Republic of the Congo, Pakistan, Nigeria and Ethiopia.
- Iron deficiency anemia was the leading cause of years lived with disability among children and adolescents, affecting 619 million in 2013.
- Developing countries with rapid declines in all-cause mortality between 1990 and 2013 experienced large declines in mortality for most leading causes of death. Countries with the slowest declines in all-cause mortality showed either a stagnant or increasing trend in most of the leading causes of death.

The authors explained a variety of limitations to their report, including variations in collecting verbal autopsy data and the quality of the medical certification of causes of death.

"The vast majority of deaths in children and adolescents are preventable. Proven interventions exist to prevent diarrheal and respiratory diseases, neonatal conditions, iron deficiency anemia and road injuries, which result in some of the highest burdens of unnecessary death and disability among [children](#) and adolescents. These findings presented herein show that these and other available interventions are underused and point to where more attention is needed. The findings indicate that proven health interventions could save millions of lives. Despite the general decline in mortality, the speed of the decline could still be faster," the article concludes.

"The article by the Global Burden of Disease (GBD) Pediatrics Collaboration in this issue of *JAMA Pediatrics* represents an important contribution to the field of global health and provides troubling evidence of the diverging trends in [child health](#) and well-being," write Paul H. Wise, M.D., M.P.H., and Gary L. Darmstadt, M.D., M.S., of Stanford University, California, in a related editorial.

"A general child health readership should recognize the value of the GBD initiative, including the article by the GBD Pediatrics Collaboration in this issue, which provides important insights into child health and mortality patterns around the world. However, there is a danger for a general child health readership, the GBD 2013 study's sophisticated methods and beautifully produced, detailed tables will mask the underlying weakness of available data in areas of greatest concern. This risk is less one of misinterpretation than of complacency, a willingness to accept the status quo as adequate. This is not inherently a critique of the GBD 2013 study effort. Rather, it is a critique of global systems that do not provide the GBD 2013 study investigators with the data they require to generate greater confidence in their estimates and analytic findings."

"This confidence will at some level reside in the technical guarantee that all lives are noticed and fundamentally valued, a guarantee that will increasingly prove essential to meeting the urgent health and justice demands of the neediest communities on earth," the editorial concludes.

**More information:** *JAMA Pediatr.* Published online January 25, 2016. [DOI: 10.1001/jamapediatrics.2015.4276](https://doi.org/10.1001/jamapediatrics.2015.4276)

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