

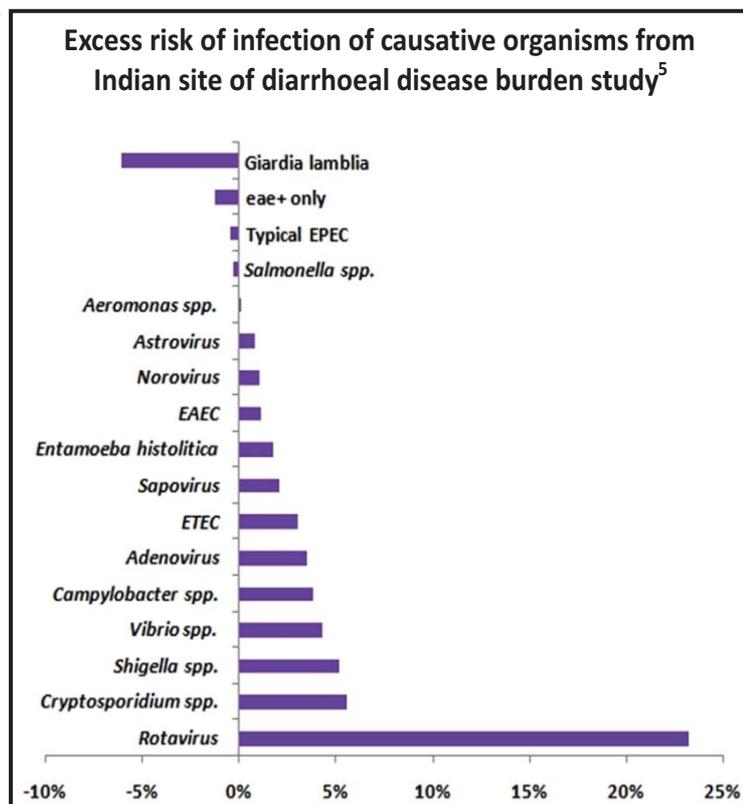


Rotavirus Disease Burden in India

Rotavirus is the most common and deadly cause of severe diarrhoea and dehydration in infants and young children. It is found everywhere and nearly every child in the world is at risk of infection. However, in places where access to urgent medical care is limited, the severe diarrhoea and vomiting caused by rotavirus can lead to lethal dehydration.

- Each year, approximately 453,000 children under the age of 5 years worldwide die from severe, dehydrating diarrhoea due to rotavirus infection—37 percent of all deaths attributable to diarrhoea. India suffers the highest mortality burden of rotavirus among all countries, with India alone accounting for 22 percent of the estimated global deaths from rotavirus.¹
- Rotavirus takes the lives of approximately 100,000 children in India each year. Based on current mortality rates, roughly 1 child in 242 dies from rotavirus infection before 5 years of age in India. Rotavirus takes its heaviest toll on the youngest children, as approximately 50 percent and 75 percent of rotavirus-associated deaths in India occur before 1 and 2 years of age, respectively.²

- The toll from illness caused by rotavirus is also significant. A study by the Indian Rotavirus Surveillance Network found that over a two-year period, from 2005 to 2007, rotavirus was responsible for approximately 39 percent of diarrhoea-related inpatient hospital visits.³ Based on these and other data, rotavirus has been estimated to cause approximately 457,000 to 884,000 hospitalizations and 2 million outpatient clinic visits each year in Indian children, incurring healthcare costs of Rs. 2.0 to 3.4 billion (US\$ 41 to 72 million).⁴



- The Global Enterics Multi-Center Study (GEMS) is a prospective, case-control study of acute diarrhoea in children 0 to 59 months of age. It is being conducted at seven sites in Africa and Asia, including the National Institute of Cholera and Enteric Diseases (NICED) in Kolkata, India. Country-level data analysis is ongoing, but early GEMS data have shown that rotavirus is responsible for the highest number of cases of diarrhoea at the NICED study site.⁵

This document is available online in English, Hindi, Tamil, Telugu, and Marathi:

<http://www.defeatdd.org/rotavac-clinical-trial-results>

DBT website: <http://dbtindia.nic.in>

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¹Tate JE, Burton AH, Boschi-Pinto C, Steele AD, Duque J, Parashar UD. 2008 Estimate of Worldwide Rotavirus-Associated Mortality in Children Younger than 5 Years Before the Introduction of Universal Rotavirus Vaccination Programmes: A Systematic Review and Meta-analysis. *The Lancet Infectious Diseases*. 2012;12(2):136-141.

²Morris SK, Awasthi S, Khera A, et al. Rotavirus Mortality in India: Estimates Based on a Nationally Representative Survey of Diarrhoeal Deaths. *Bulletin of the World Health Organization*. 2012;90:720-727.

³Kang G, Arora R, Chitambar SD, et al. Multicenter, Hospital-Based Surveillance of Rotavirus Disease and Strains Among Indian Children Aged <5 Years. *Journal of Infectious Diseases*. 2009;200(Supplement 1):S147-S153.

⁴Tate JE, Chitambar S, Esposito DH, et al. Disease and Economic Burden of Rotavirus Diarrhoea in India. *Vaccine*. 2009;27(Supplement 5):F18-F24.

⁵Sur D. Global Enteric Multicentric Study (GEMS): Kolkata Site. Presented at: 57th All India Conference of the Indian Public Health Association, February 2013; Kolkata, India.