

Key Facts About Rotavirus Disease and Vaccines

Recent studies demonstrate that crucial gaps exist in the awareness of rotavirus disease among public health providers in developing countries.¹ Yet this missing information is key to designing effective rotavirus control strategies. Here is a summary of the most important facts about rotavirus disease and vaccines.

1. Rotavirus causes severe diarrhea, vomiting, and fever leading to rapid dehydration.
2. Rotavirus is responsible for the deaths of an estimated 600,000 children worldwide each year, 80 percent of whom live in developing countries.² Due to a lack of routine rotavirus surveillance in some regions, the extent of rotavirus disease mortality is unknown in many countries.
3. Rotavirus causes nearly 2 million hospitalizations each year. In Asia, up to 45 percent of the children hospitalized for diarrhea are infected with rotavirus.³
4. Rotavirus is found in all countries. Almost every child in the world will suffer at least one infection by the time he or she is 3 years old.
5. Providing clean drinking water and otherwise improving sanitation and hygiene do not significantly reduce the spread of rotavirus. But few people are aware of this fact—they assume that rotavirus can be controlled like other water-borne diseases. This is one of the most dangerous information gaps because it undermines the development of effective rotavirus control strategies.
6. Because children with rotavirus often suffer frequent bouts of vomiting, parents and caregivers have difficulty administering oral rehydration solution (ORS) at home, lessening its effectiveness.⁴
7. Studies of two new rotavirus vaccines recently demonstrated their safety and efficacy among children in middle- and high-income countries.^{5,6}
8. Clinical trials have been launched, and additional studies are planned, to evaluate the impact of vaccines as a method for the prevention of severe rotavirus disease in developing countries. Results generated from these trials will help national governments make informed decisions about introducing the vaccines in the public sector.
9. Enhancing diarrheal disease control through a combined prevention and treatment strategy—incorporating rotavirus vaccine; new, low-osmolarity formulations of ORS; and zinc supplementation during diarrhea episodes—can rapidly and significantly reduce child mortality where diarrheal disease is a serious burden.

For more information about rotavirus visit
www.rotavirusvaccine.org or email rvinfos@path.org.

1. Studies were conducted by PATH in 2005 in India, Indonesia, Nicaragua, Thailand, and the Ukraine. Results have been submitted for publication.
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4. Ahmed F. Children at risk of developing dehydration from diarrhea: A case-control study. *Journal of Tropical Pediatrics*. 2002; 48(5): 259–263.
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6. Vesikari, T, Matson D, Dennehy P, et al. Safety and efficacy of a pentavalent human–bovine (wc3) reassortant rotavirus vaccine. *New England Journal of Medicine*. 2006;354(1):23-33. Available online: <http://content.nejm.org/cgi/content/full/354/1/23>.