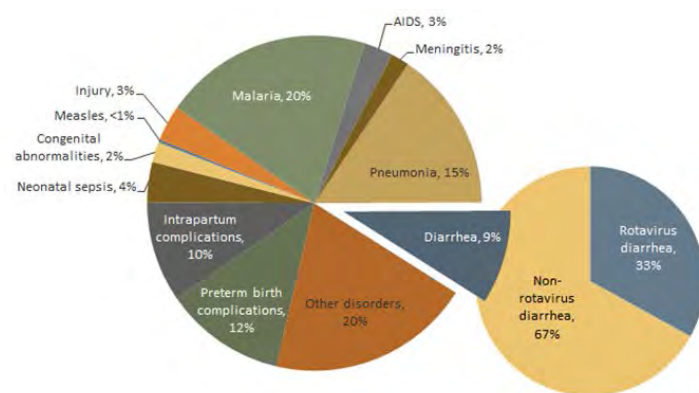


Rotavirus disease and vaccines in The Gambia

Diarrhea is a leading killer of children in The Gambia, causing approximately nine percent of deaths in children under five years of age.¹ Rotavirus, the most common cause of severe and fatal diarrhea in young children worldwide, takes the lives of nearly 300 Gambian children under five each year and accounts for approximately one-third of all under-five diarrheal deaths and diarrheal disease hospitalizations in The Gambia.² The Global Enteric Multicenter Study (GEMS) recently confirmed the public health burden of rotavirus in The Gambia, demonstrating that it is the most common cause of moderate-to-severe diarrhea in young children under two years of age.³ Studies in Africa show that rotavirus vaccines are safe and effective against severe rotavirus disease and are a cost-effective intervention.⁴⁻⁶

On August 14, 2013, The Gambia will become the 15th GAVI-eligible country to introduce rotavirus vaccines in its national immunization program. The high burden of rotavirus disease in Gambian children, coupled with the power of rotavirus vaccines to prevent childhood deaths and hospitalizations, underscores the incredible potential for The Gambia's introduction of rotavirus vaccines to save children's lives.

Causes of death in Gambian children under five years of age, 2010^{1,2}



ROTAVIRUS IS THE LEADING CAUSE OF SEVERE AND FATAL DIARRHEA IN AFRICAN CHILDREN <5 YEARS OLD

Globally, rotavirus causes more than 450,000 deaths each year in children under five and is responsible for millions of hospitalizations and clinic visits.^{7,8} Nearly a quarter of a million African children die from the dehydrating diarrhea

caused by rotavirus infection every year, accounting for more than 50 percent of the global total of rotavirus deaths.^{2,7}

The Gambia Facts

Total population (2011)⁹:	1,791,225
Population children <5 (2011)¹⁰:	291,746
Total live births (2011)¹⁰:	66,915
Mortality rate children <5 (2011)¹⁰:	101/1,000 live births
Total number <5 deaths (2011)¹⁰:	6,385
Number of <5 deaths due to diarrhea (2010)¹:	555
Number of <5 deaths due to rotavirus (2008)²:	290

ROTAVIRUS TREATMENT AND PREVENTION STRATEGIES

Rotavirus is highly contagious and spreads easily from person-to-person through contaminated hands and objects. It cannot be treated with antibiotics or other drugs. Mild rotavirus infections can be treated effectively in the same manner as other forms of diarrhea, by providing fluids and salts (oral rehydration therapy). However, children with severe rotavirus diarrhea can become dehydrated and often need intravenous fluids or they risk dying. In developing countries, this type of urgent health care is often inaccessible or unavailable, making rotavirus prevention through vaccination critical to saving children's lives.

Vaccination is the best way to prevent rotavirus disease and the deadly dehydrating diarrhea that it causes. Improvements in water quality, hygiene, and sanitation stop bacteria and parasites that cause other forms of diarrhea but do not adequately prevent the transmission of rotavirus. Lifesaving rotavirus vaccines should be introduced as part of a comprehensive approach to control diarrheal disease, along with other interventions including oral rehydration therapy, breastfeeding, zinc treatment, and improvements in water and sanitation.

TWO SAFE AND EFFECTIVE ROTAVIRUS VACCINES ARE SAVING LIVES TODAY

There are two orally administered rotavirus vaccines available today: Rotarix[®], manufactured by GlaxoSmithKline, and RotaTeq[®], manufactured by Merck & Co., Inc. Both vaccines have been shown to be safe and

effective in large-scale clinical trials in Africa, Asia, Europe, Latin America, and the US. Clinical trials in Africa (Ghana, Kenya, Malawi, Mali, and South Africa) found that rotavirus vaccines reduced severe rotavirus disease by more than 60 percent during the first year of life, when children are at greatest risk for severe rotavirus diarrhea.^{4,5}

In June 2009, based in part on results from clinical trials in Africa that demonstrated that rotavirus vaccines significantly reduced rotavirus disease in impoverished, high-mortality settings, the WHO's Strategic Advisory Group of Experts recommended that rotavirus vaccines be included in all countries' national immunization programs.¹¹ As of August 14, 2013, 47 countries have introduced rotavirus vaccines in their national immunization programs, including nine in Africa: Botswana, The Gambia, Ghana, Malawi, Morocco, Rwanda, South Africa, Sudan, and Tanzania. Nineteen additional countries in Africa have been approved by GAVI for rotavirus vaccine support including: Angola, Burkina Faso, Burundi, Cameroon, Central Africa Republic, Republic of the Congo, Djibouti, Eritrea, Ethiopia, Guinea-Bissau, Kenya, Madagascar, Mali, Niger, Sierra Leone, Togo, Zambia, and Zimbabwe.¹²

Rotavirus vaccines are saving lives and improving health in countries where children have access to them. Swift and significant declines in hospitalizations and deaths due to rotavirus and all-cause diarrhea have been observed in many countries that have included rotavirus vaccines in their national immunization programs.¹³ Researchers also have found that use of rotavirus vaccines may protect unvaccinated children and adults by reducing transmission (an effect called herd immunity).¹⁴

ROTA VIRUS VACCINES ARE COST-EFFECTIVE AND A WISE INVESTMENT

Rotavirus vaccines are cost-effective, and in GAVI-eligible countries, where 95 percent of deaths due to rotavirus occur, more than 2.4 million child deaths can be prevented by 2030 by accelerating access to lifesaving rotavirus vaccines.⁶ If used in all GAVI-eligible countries, rotavirus vaccines could prevent an estimated 180,000 deaths and avert 6 million clinic and hospital visits each year, thereby saving US \$68 million annually in treatment costs.⁶

Rotavirus vaccines are an essential and lifesaving intervention in comprehensive diarrhea-control strategies.

Accelerating access to rotavirus vaccines will not only save the lives of Gambian children but also lessen the tremendous economic and health burden of rotavirus disease, thereby contributing to poverty reduction and economic growth. GAVI and its partners plan to support the introduction of lifesaving rotavirus vaccines in at least 30 of the world's poorest countries by 2015.

For more information on rotavirus disease and vaccines please visit <http://rotavirusvaccine.org>.

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