



tends to peak during the winter months in developed countries but occurs year round in most developing countries.

Serotypes of rotavirus are distinguished by two surface proteins (G and P protein) of the virus. There are over 100 combinations of the major G (glycoprotein) and P (protein) types of antigens. Relatively few strains are common globally in humans, but the specific serotypes in circulation vary widely among countries, with striking differences even between some neighboring countries and over time in the same country. Rotavirus strains are also common in pigs, cattle, dogs and other animals, and the strains in animals and people are constantly evolving. Interspecies transmission of rotavirus is uncommon but has been documented.

Dr. Mary Agocs described the World Health Organization (WHO) Network of hospital-based surveillance and laboratory capacity for rotavirus detection and typing. The first network was established in Asia in 1999, and included 9 countries in its first phase, in 2001-2003. Using funding provided primarily by the Global Alliance for Vaccines and Immunizations (GAVI), WHO subsequently coordinated development of surveillance networks via its regional offices, with strong linkages to ministries of health. By November 2007, networks had been established covering all regions of WHO, with six reference laboratories. The main aims of these networks are to determine the burden of disease, establish baseline epidemiological trends, and monitor the impact on those during and after introduction of rotavirus vaccines. 55 member states are currently part of the WHO network for surveillance of rotavirus infections, with other countries conducting surveillance and reporting to the regional offices. Sentinel sites in participating countries and regional reference laboratories report to WHO headquarters quarterly, and WHO will issue a summary report of the data at six monthly intervals. The first six-monthly report is due before the end of 2009, and a global surveillance meeting will be held in 2010.

Dr. Manish Patel summarized the current status of rotavirus vaccines. Two vaccines have been licensed for immunizing infants against rotavirus: Rota Teq®, by Merck, is a live, attenuated pentavalent vaccine administered orally in three doses, given between 6 and 32 weeks of age. Rotarix®, by GlaxoSmithKline, is a live, attenuated monovalent vaccine administered orally in two doses, given between 6 and 24 weeks of age. Both vaccines require refrigeration, and the relatively large per-dose volume of the vaccines is also a challenge for immunization programs. Introduced in 2006, both vaccines have proven to be safe and effective against severe rotavirus gastroenteritis when given as recommended after introduction in North and South America and without increased rates of intussusception that followed introduction of an earlier rotavirus vaccine. Efficacy trials in Asia and Africa demonstrated significant public health benefit of the vaccines. Both vaccines also provide cross-protection against other strains of rotavirus besides the specific serotype(s) in the vaccine. Average efficacy has tended to be better (85-100%) against severe rotaviral diarrhea in high and middle-income countries as compared to in low-income countries (50-70%), but there is no interference when vaccine against rotavirus is administered simultaneously with vaccine against polio virus. Data from the United States, Mexico and Australia have shown a dramatic impact in reduced

hospitalizations and/or deaths due to diarrhea after introduction of rotavirus vaccine. Early studies also suggest a possible “herd im

low-income countries with high burden of disease, use of the vaccines there still provides a significant public health impact.

4. The Task Force joins the World Health Orga