LEADERSHIP AND INNOVATION IN GLOBAL HEALTH
11th International Rotavirus Symposium

September 3, 2014

DR. TREVOR MUNDEL
PRESIDENT, GLOBAL HEALTH
For Third World, Water Is Still a Deadly Drink

By NICOLAS B. KRISTOF

AIDS has been called the "epidemic of the 1980s." Waterborne disease is known to have killed at least 14 million people in the world in the 1980s. The tally for 1997 could be higher.


World's Impoverished Lands, Water Is a Deadly Drink

A CLOSER LOOK

Death by Water

A huge range of illnesses and parasites infect people because of contaminated water and food, and poor personal and domestic hygiene. Millions are most of them children. Here are some of the deadliest water-related disorders:

DENGUE

Estimated deaths per year:

CHOLERA

Diarrhea is itself not a disease but a symptom of an underlying problem, usually the result of contaminated water.
INDIA’S LEADERSHIP AND PROGRESS IN HEALTH

- Since 1990, 50% reduction in child mortality in India
- Wild poliovirus eliminated in 2011
- Health system and routine immunization strengthening
- Pentavalent vaccine introduction scale up under way across the country
- Rotavirus, Rubella, Inactivated Polio Vaccine, and Japanese Encephalitis for adults added to Universal Immunization Program
- A robust pharmaceutical industry
Indian vaccine manufacturers now supply about 53% of vaccines to developing countries.

Significant novel contributions include:
- Serum Institute of India’s MenAfriVac® vaccine
- Shantha Biotechnic’s Shanchol™ cholera vaccine
- Biological E’s pentavalent vaccine

And the newest contribution:
- Bharat Biotech’s ROTAVAC® vaccine
Rotavirus is the most common cause of diarrheal death in young children.

Tate JE, Burton AH, Boscho-Pinto C et al. Lancet Infect Dis 2010
SIXTY-NINE COUNTRIES HAVE ADDED ROTAVIRUS TO THEIR IMMUNIZATION PROGRAMS

Since introduction of the rotavirus vaccine in 2009:

- 40-50% reduction in diarrhea hospitalizations among children
- 60-70% reduction in rota-associated hospitalizations among vaccinated children

Impact of rotavirus vaccine in South Africa (Dr George Mukhari hospital sentinel site, University of Limpopo Medunsa Campus)
Substantial declines in childhood diarrhea deaths have been documented since introduction of the rotavirus vaccine in 2007.

67% of all rotavirus deaths occur in these 10 countries (2008)

- India (21.8%) 98,621
- Nigeria (9.1%) 41,057
- Pakistan (8.6%) 39,144
- DR Congo (7.2%) 32,653
- Ethiopia (6.2%) 28,218
- Afghanistan (5.6%) 24,423
- Uganda (2.3%) 10,637
- Indonesia (2.2%) 9,970
- Bangladesh (2.2%) 9,857
- Angola (1.9%) 8,788

% is percent of total global rotavirus deaths
OPPORTUNITIES IN THE NEXT DECADE

- Reduce global incidence of diarrheal diseases through:
  - Worldwide deployment of the rotavirus vaccine
  - Continued development of prophylactic and therapeutic vaccines/meds against other diarrheal infections (ETEC, shigella, etc.)
  - Broad scale-up of affordable, non-sewered sanitation solutions
  - Access to clean water
- Elimination of kala-azar (visceral leishmaniasis)
- 10-valent pneumococcal conjugate vaccine
EVERY PERSON DESERVES THE CHANCE TO LIVE A HEALTHY, PRODUCTIVE LIFE