Global Health

Rotavirus Leads Global Diarrhea Hospitalizations Among Young Children

Rotavirus was the leading cause of diarrhea requiring hospitalization among young children in 28 low- and middle-income countries despite the introduction of rotavirus vaccine, according to a study published in BMJ Global Health.

Stool specimens were randomly selected from children with diarrhea and tested for 16 causes. The samples came from 5465 children younger than 5 years who were hospitalized with diarrhea in a surveillance network of 33 hospitals in 2017 and 2018.

Overall, the leading causes of diarrhea requiring hospitalization were rotavirus—which accounted for a third of cases—followed by Shigella, norovirus, and adenovirus types 40 and 41. Rotavirus was the leading cause of diarrhea in all regions except the Americas. Shigella was the leading cause in Central America, and norovirus was the leading cause in South America.

By the end of 2017, rotavirus vaccines had been introduced in 21 of the 33 surveillance network sites. The proportion of hospitalizations attributable to rotavirus was about 21% in sites where rotavirus vaccine was introduced compared with about 42% in sites where it wasn’t, study results indicated.

“Improving the efficacy and coverage of rotavirus vaccination and prioritizing interventions against Shigella, norovirus and adenovirus could further reduce diarrhea morbidity and mortality,” the study authors concluded.

Estimate: 10.5 Million Children Lost a Parent, Caregiver to COVID-19

About 10.5 million children worldwide experienced COVID-19-associated loss of parents and caregivers through May 1, 2022, according to estimates based on World Health Organization (WHO) data. COVID-19 orphaned an estimated 7.5 million of those children.

Writing in JAMA Pediatrics, researchers cautioned that the consequences for bereaved children can be “devastating,” including traumatic grief, abuse, mental health problems, and poor educational and health outcomes.

Using excess deaths data from WHO, The Economist, and the Institute for Health Metrics and Evaluation (IHME), researchers estimated the number of bereft children in every country to measure COVID-19’s effect on orphanhood and caregiver loss. WHO data are more conservative than findings from IHME and The Economist, the study authors explained.

The WHO regions of Africa and South-east Asia had more children affected by orphanhood and caregiver loss than had the Americas, Eastern Mediterranean, European, and Western Pacific regions through May 1, 2022. Countries with the highest numbers of bereaved children in the Southeast Asia WHO region included Bangladesh, India, Indonesia, Myanmar, and Nepal. In Africa, the Democratic Republic of Congo, Ethiopia, Kenya, Nigeria, and South Africa were among those with the most bereaved children, the study reported.

“Effective, caring action to protect children from immediate and long-term harms of COVID-19 is an investment in the future and a public health imperative,” the researchers concluded.

An Association Between Heavy Rainfall and HIV in Sub-Saharan Africa

Underdeveloped regions such as sub-Saharan Africa are disproportionately affected by both climate change and HIV. Now, researchers have used survey data collected over 12 years in 21 countries in sub-Saharan Africa to explore the associations between HIV infections and heavy rainfall.

Experiencing heavy rainfall was associated with higher odds of having HIV, sexually transmitted infections, and more sexual partners in a study involving 288 333 survey respondents—about 60% of them women—published in JAMA Network Open.

The association of heavy rainfall with prevalent HIV was more likely in rural areas. This could suggest that worsening food insecurity can lead to transactional sex to pay for food, resulting in HIV infection, the researchers explained. People in rural areas are more likely to grow their own food and heavy rainfall can deplete crop yields. Heavy rainfall also could reduce access to public health infrastructure needed for sexually transmitted infection education, HIV testing, and treatment, according to the study authors.

One caveat to the study is that prevalent HIV infection, rather than new HIV infection, was analyzed. It’s therefore “challenging to discern whether heavy rainfall is associated with an increase in HIV acquisition, onward HIV transmission, or an increase in HIV survival,” the authors wrote.

“Given that HIV/AIDS is a leading cause of morbidity and mortality in sub-Saharan Africa and ongoing global warming is projected to amplify extreme weather events in the region, understanding associations between HIV/AIDS and extreme weather events is critical,” the study concludes.

Global Health Care Facilities Lack Basic Hygiene Services

Little more than half of health care facilities worldwide meet the criteria for basic hand hygiene services, according to a recent report.

Basic service is defined as having functional hand hygiene facilities with water and soap, alcohol-based hand rub, or both available where patients receive care and are close to toilets at health care facilities, according to the August 2022 report from the World Health Organization (WHO)/United Nations Children’s Fund (UNICEF).
Joint Monitoring Programme for Water Supply, Sanitation and Hygiene.

The report updates national, regional, and global estimates for WASH (water, sanitation, and hygiene) plus health care waste management and environmental cleaning in health care facilities up to 2021. Hygiene data are available for 40 countries, which represent 35% of the world's population, according to a news release.

Only 51% had hand hygiene services both at the point of care and near toilets, meeting the criteria for basic hygiene services. In the least developed countries, 32% of health care facilities had a basic hygiene service. Globally, 1 of 11 health care facilities had no service.

"Hygiene facilities and practices in health care settings are non-negotiable," said Maria Neira, MD, MPH, director of the department of environment, climate change and health at WHO, in the statement. — Deanna Bellandi, MPH

Note: Source references are available through embedded hyperlinks in the article text online.