Etiology of diarrhea in hospitalized children under 5 years in Africa: preliminary results from the first two years of the Global Paediatric Diarrhea Surveillance network, 2017-2018

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While diarrhea remains a leading cause of mortality and morbidity in low-income countries for children under 5 years of age, the on-going introduction of rotavirus vaccines into national immunization programs has reduced rotavirus diarrhea burden significantly. The World Health Organization-coordinated African Rotavirus Surveillance Network was expanded to include surveillance for other enteropathogens as part of Global Paediatric Diarrhea Surveillance (GPDS). Stool samples were tested using TaqMan Array Cards (TAC) and qPCR to provide data on the etiology of diarrhea in hospitalized children<5 years of age. Of the 32 countries conducting rotavirus surveillance in the WHO African Region, 11 countries were supported to expand rotavirus surveillance to include other enteropathogens as part of GPDS; 9 of these 11 countries have introduced rotavirus vaccine into their routine infant immunization schedules. . Preliminary analysis of data from the first two years (2017-2018) showed that enteric pathogens with the highest attributable incidence among these African countries were rotavirus (4.9 attributable episodes per 100 child-years; 95% confidence interval: 4.2 – 5.5), Shigella (1.8; 1.1 – 2.2), Cryptosporidium (1.6; 1.2 – 1.9), adenovirus 40/41 (1.1; 0.5 – 1.7), norovirus GII (0.7; 0.5 – 1.0), and heat-stable enterotoxin enterotoxigenic *Escherichia coli* (ST-ETEC) (0.6; 0.2 – 0.9); this distribution of pathogens is similar to what was identified in 17 other GPDS participating countries globally, except that the African region has the highest estimated burden of Cryptosporidium. These data highlight the importance of rotavirus as a major cause of severe diarrhea as well as the importance of *Shigella*, *Cryptosporidium*, and adenovirus in this region.