

# Sustained reduction in pediatric diarrhea hospitalizations at 2 sentinel hospitals in Tanzania 6 years after rotavirus vaccine introduction: data from Mnazi Mmoja Hospital in Zanzibar and Dodoma Regional Hospital in mainland

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## Background

Monovalent rotavirus vaccine was introduced in Tanzania in January 2013. Continued surveillance for rotavirus hospitalizations is valuable for several years to understand how well protection is sustained in early childhood.

## Methods

For Mnazi Mmoja Hospital, we applied rotavirus-test positive proportion of children <5 years enrolled into diarrhea surveillance to the children admitted for diarrhea who were not tested, to estimate total number of rotavirus-positive (and negative) diarrheal hospitalizations in 2017–2018. For Dodoma, we evaluated total diarrheal hospitalizations.

## Results

Most children hospitalized for diarrhea were enrolled. At Mnazi Mmoja, rotavirus was detected in 11% (52/475) of children enrolled in 2017 and 23% (128/548) in 2018. Compared with prevaccine (2010–2012 median=444), estimated rotavirus hospitalizations were reduced by 85% (2017) and 67% (2018), proportionately greater ( $p<.0001$ ) than reductions in estimated rotavirus-negative hospitalizations (42% and 37%, respectively). Reductions were similar for infants, children aged 1 and 2–4 years. Total diarrhea hospitalizations were 52% lower in 2017–2018, compared to prevaccine median ( $n=1127$ ). At Dodoma, rotavirus was detected in 20% (46/225) and 19% (22/114) of children enrolled in 2017 and 2018, respectively. Compared to prevaccine (2011–2012 mean=432), total diarrhea hospitalizations were 42% (2017) and 52% (2018) lower.

## Conclusion

Hospitalizations for diarrheal illness among children were lower than in prevaccine period. Reductions in rotavirus hospitalizations were proportionately greater than reductions in rotavirus-negative hospitalizations, supporting the sustained impact of the rotavirus vaccine program in Tanzania.