Rotavirus Infection in Hospitalized children under five years in three Sentinel Surveillance Site Hospitals in Uganda

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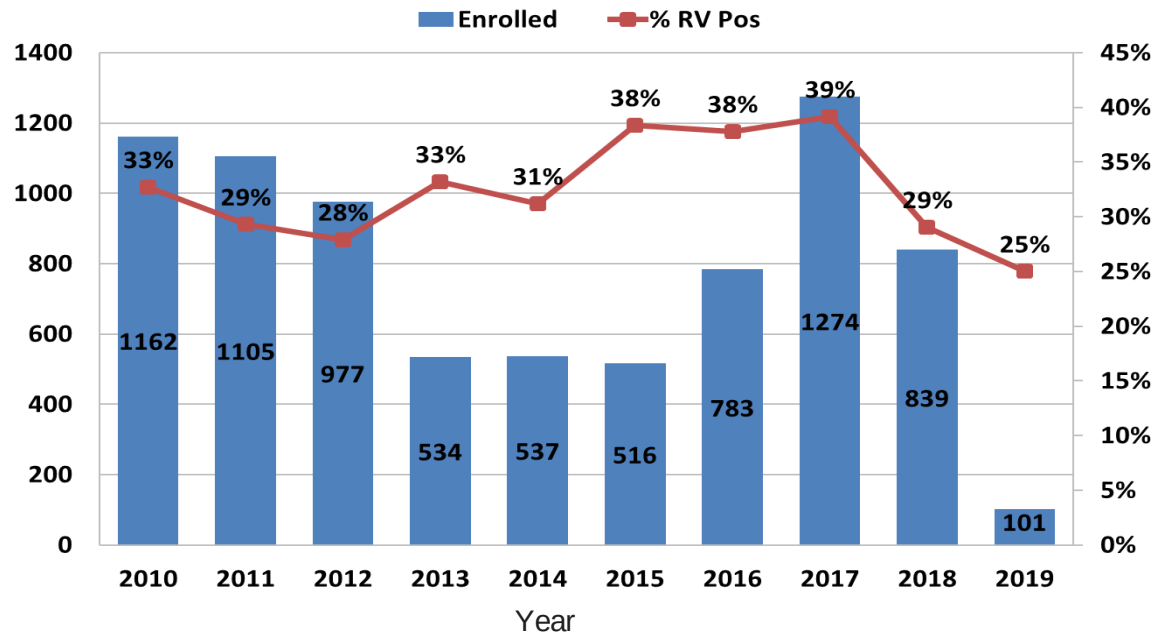
Background
Acute gastroenteritis is a serious cause of child mortality and morbidity in resource-limited countries. Viral etiology is the most common and Rotavirus is among the leading causes of severe diarrhea among children under five years of age worldwide. To determine the prevalence of severe Rotavirus Infection in children under five admitted with acute diarrhoea attending Mulago National Referral, Lubaga and Naguru Hospital, active sentinel site surveillance was carried out from 2010 to 2019.

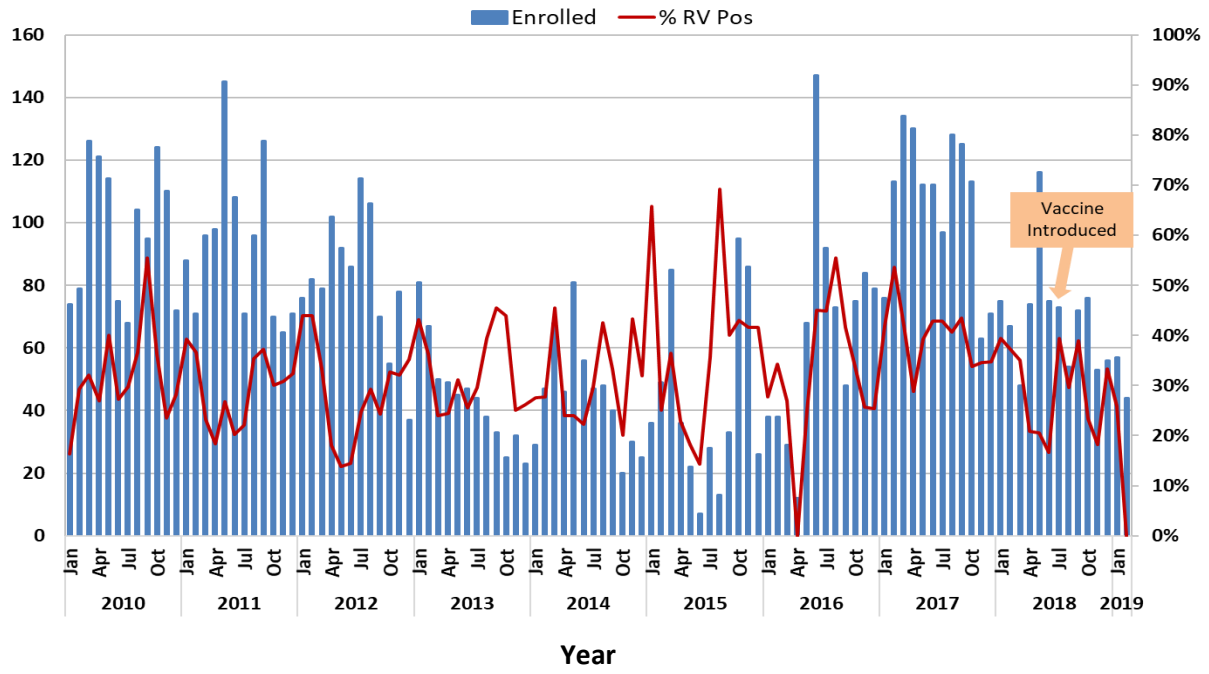
Methodology
A total of 7828 children with acute diarrhea were enrolled into the public health sentinel site surveillance system from 2010 to 2019. Stool collected was tested for Rotavirus antigen by use of an enzyme immunoassay (Oxoid prospect Rotavirus Kit).

Results
Rotavirus infection occurred throughout the surveillance period. Annual Prevalence through the years varied from 25 to 39%.

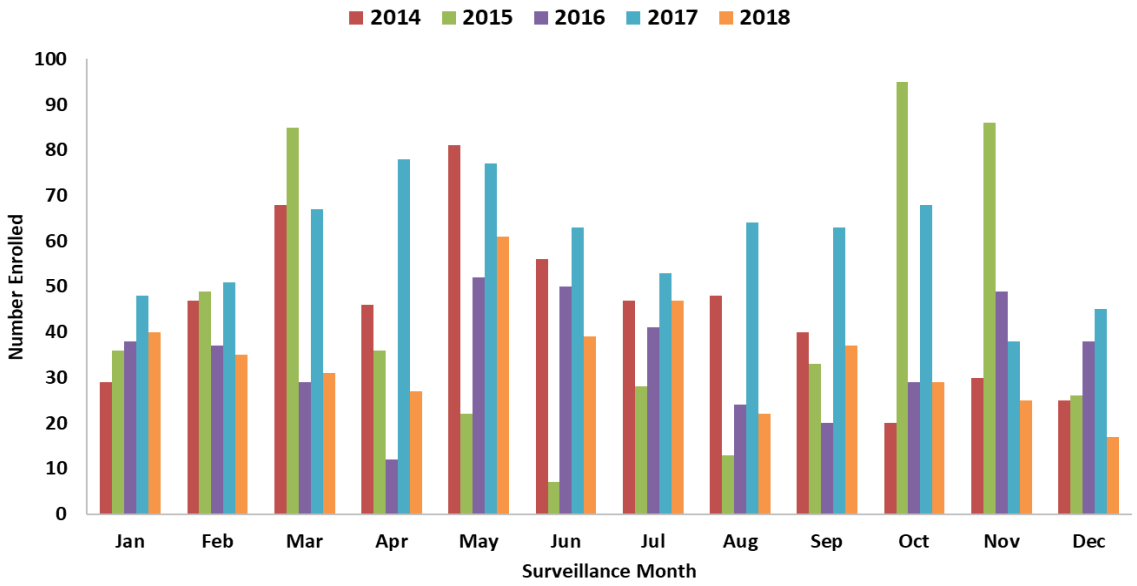
Enrolled Diarrhoea cases and % RV Positivity, 2010 - 2019



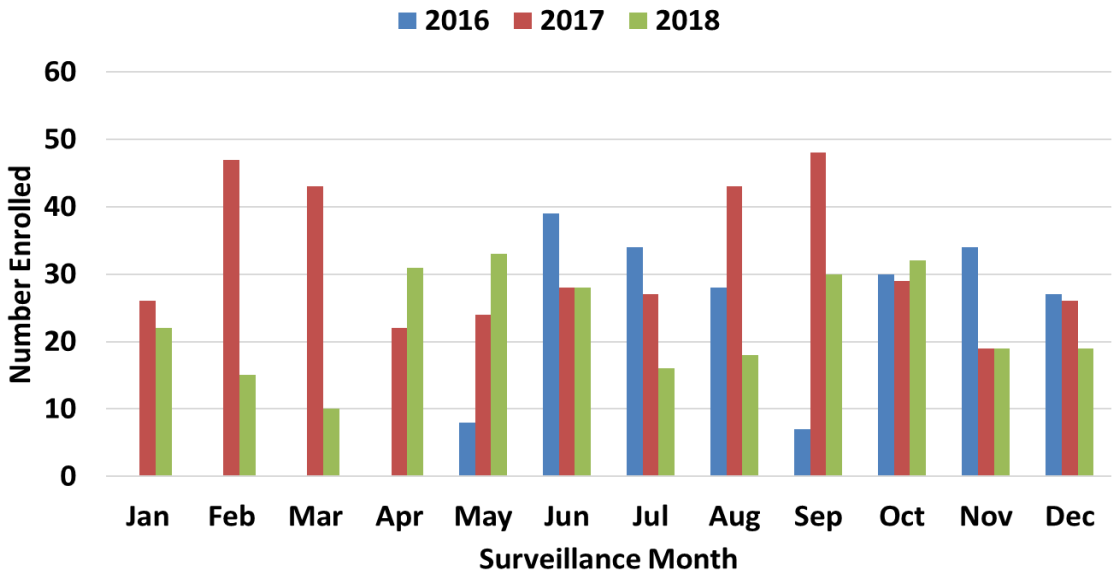
Monthly distribution of enrolled diarrhea cases and % RV +ves, 2010 – 2019



Diarrhoea hospitalizations per month, 2014 – 2018, Mulago hospital, Uganda

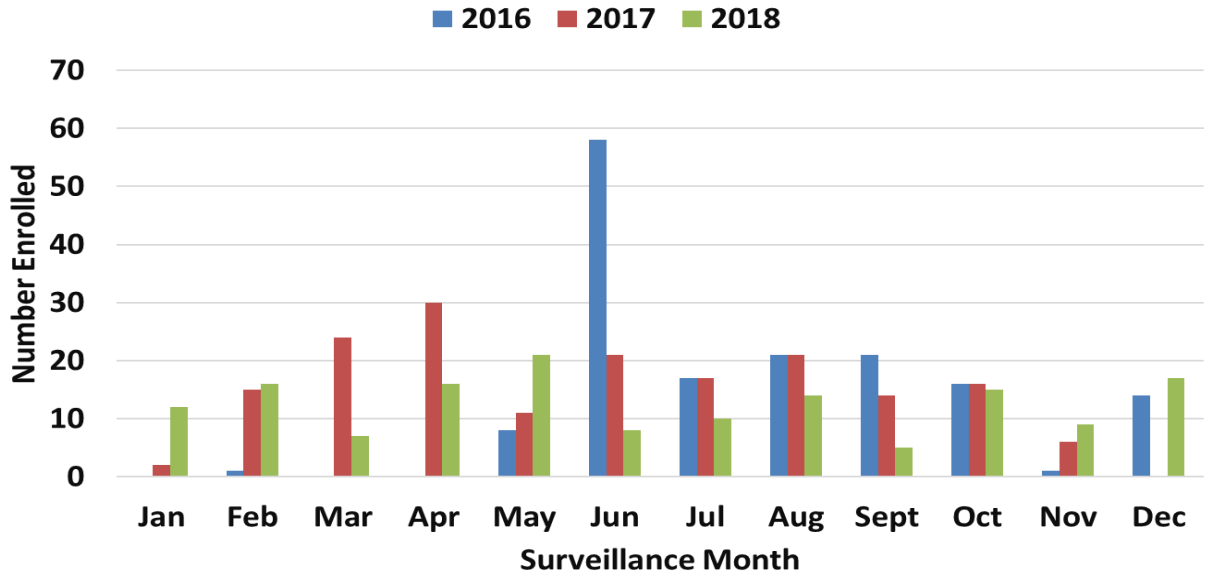


Diarrhoea hospitalizations per month, 2016 – 2018, Lubaga hospital, Uganda

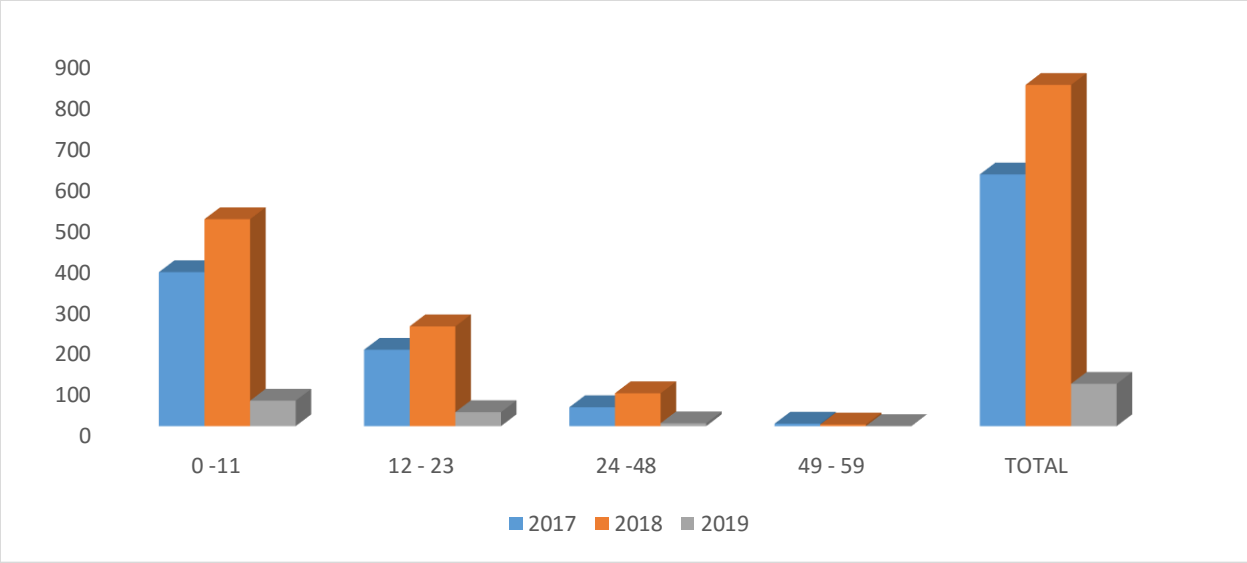


N.B. Lubaga & Hospital joined the surveillance network in 2016

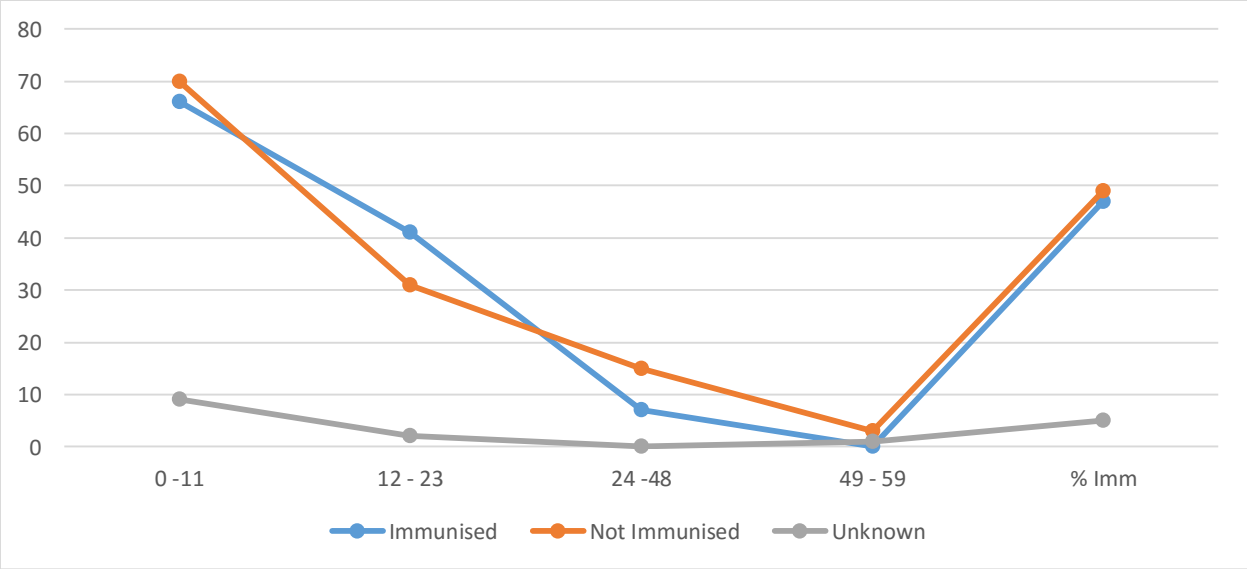
Diarrhoea hospitalizations per month, 2016 – 2018, Naguru hospital, Uganda



Age Category of Rotavirus Positive cases (July 2017 to Feb 2019)



Rota positive cases Vs Immunization Status



Sentinel site surveillance has demonstrated Rotavirus is still a leading cause of childhood hospitalizations with diarrhoea in Uganda. Highest prevalence is in children less than two years of age.

Conclusion

With the introduction of the Rotavirus Vaccine into the Uganda Ministry of Health Immunization Schedule in July 2018, active sentinel site surveillance can still be a very good avenue to monitor vaccine impact though it is still too early to draw conclusions based on preliminary data.

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