

# Rotavirus A infection in children under two months of age non illegible for vaccination in Mozambique

Chissaque A<sup>1,2</sup>; J Langa<sup>1</sup>; E João<sup>1,2</sup>; B Munlela<sup>1,3</sup>; B Simone<sup>1,3</sup>; A Bauhofer<sup>1</sup>; J Chilaúle<sup>1</sup> & de Deus N<sup>1</sup>  
<sup>1</sup>Instituto Nacional de Saúde; <sup>2</sup>Institute of Hygiene and Tropical Medicine, Lisbon <sup>3</sup>Universidade Eduardo Mondlane

## Background

Mozambique introduced Rotarix<sup>®</sup> vaccine in the national immunization program in September 2015. There are few studies addressing this age group and there is a need of understand the epidemiology of infection in this population assuming that has maternal antibodies protection against rotavirus infection. The aim of this study was to investigate the epidemiology of rotavirus infection in infants non-illegible for rotavirus vaccination.

## Method

The analysis was performed using data from 2014-2018 regarding children  $\leq 2$  months of age hospitalized with diarrhea enrolled in National Surveillance of Diarrhea which involves six sentinel sites. Collected samples were screened by ELISA (ProSpecT Rotavirus Microplate Assay) to investigate RVA antigen and the positive samples were genotyped using Multiplex RT-PCR as described by Gouvea *et al* (1990) and Gensh *et al* (1992).

## Results

In 2014-2018, 2.241 children under 5 years old were enrolled to the surveillance, from which 2.9% (74/2.241) were  $\leq 2$  months. Overall, 57 samples were collected and tested. Sixteen (21.3%) samples were positive for RVA in which 42.1% (8/19) were before vaccine introduction and 22.2% (8/36) after vaccine. Children presented fever and vomit as the principal symptom. Almost half 43.7% (7/16) were feed by formula and 25% (4/16) of the children's mothers were HIV+. Genotyping was done for 9 samples, from which, 50% (5/10) were G1P[8], 30% (3/10) G9P[6] and 10% (1/10) G2P[6].

## Conclusion

Children under two months of age even with the protection of maternal antibodies are infected by rotavirus. There is a need to study this population in order to understand some factors which can contribute to RVA infection: why half of babies in this age are not breastfeed, the high proportion of malnourished children and the role of HIV co-infection, those factors can play role in the low effectiveness of rotavirus vaccination.