

Progress of the rotavirus vaccine introduction and impact of vaccines on rotavirus hospitalizations among children under five years of age in Africa

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Background

African Rotavirus sentinel site surveillance platform was established to generate high quality data for monitoring of impact of rotavirus vaccines which is critical to document the value of investment and the public health impact of the rotavirus vaccination.

Methods

The WHO co-ordinated African Rotavirus Surveillance network (AFR RSN) comprises of 33 Member States that conduct hospital based sentinel surveillance for acute diarrheal hospitalizations in children under 5 years using standardized protocols for rotavirus case ascertainment, laboratory diagnosis and molecular genotyping techniques. Performance is monitored monthly using standard indicators and feedback provided on regular basis. Data provided by the AFRSN has been used to generate regional and country specific disease burden estimates – valuable data to support evidence based decision making vaccine introduction into routine EPI.

Results

During the period, 2006 to 2018, a total of 91, 134 children aged <5 years met the case definition of acute gastroenteritis and were enrolled in the surveillance. Stool specimens were collected from 92% of the hospitalized < 5 children and were tested for rotavirus using a standardized ELISA. Thirty eight (38/54; 70%) countries in the Africa have introduced rotavirus vaccines into their national EPI. Several of these countries using these vaccines as part of routine EPI have evaluated the impact and effectiveness of these vaccines on diarrhea disease burden. There has been a decline of approximately 40% in acute gastroenteritis in children <5 years hospitalized in hospital sentinel sites following rotavirus vaccine introduction Regional rotavirus vaccine coverage increased slowly from 29% (2014), 43% (2016) and 46% (2017). Notably, the coverage is below other EPI vaccines.

Conclusion

Regional sentinel surveillance system has provided evidence to support decisions to introduce rotavirus vaccine as part of routine immunization. This platform is being used to monitor the impact of rotavirus vaccination which has potential for large public health benefits of rotavirus vaccination as demonstrated by ongoing rotavirus vaccine impact evaluations. There is need to support the remaining 16 countries to introduce rotavirus vaccines. However the current global rotavirus vaccine supply shortages and the transition of some countries from Gavi-eligibility, present enormous challenges to enhancing the potential full impact of rotavirus vaccine in Africa.