

Support for use of diagnostics for cholera prevention and control

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Expansion of diagnostics initiative for Gavi 5.0 following success with Yellow Fever

Successful Yellow Fever diagnostic initiative shown to reduce time to diagnostics - first kits arriving now.

December 2021, Gavi Board approved funding to improve availability of fit-for-purpose diagnostics tools

- Cholera
- Measles
- Meningococcus
- Rubella
- Typhoid
- Yellow Fever

- ✓ To improve efficiency, effectiveness and equity of vaccine support
- ✓ To addresses market failures in diagnostics



Gavi support for better diagnostic tools will include multiple activities

- Develop target product profiles for tests to support immunisation programmes
- Fund demand through pooled procurement mechanism to encourage commercial availability of validated test kits
- Fund evaluation of diagnostic tests to identify which are fit-for-purpose
- Develop & disseminate testing guidance to support immunisation programmes
- Distribute diagnostic tests for surveillance of relevant diseases to countries eligible for Gavi new vaccine support
- Facilitate transition to country funding of diagnostic procurement over time

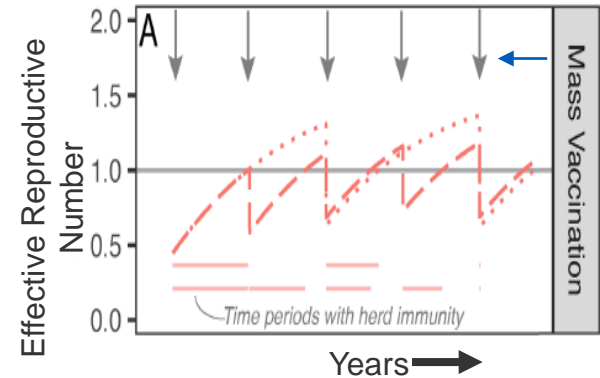
This will entail collaborations with individuals and groups within and beyond the Gavi Alliance

Preventive vaccination drives in Gavi-eligible countries need better diagnostic capacity

- Oral Cholera Vaccine preventive campaigns (2018 VIS) to be targeted at cholera hotspots
- Current Gavi 5.0 forecast for cost of OCV outbreak and response campaigns: US\$ 349 million
- Hotspots targeted for vaccination using surveillance for suspected cholera and acute watery diarrhea (AWD)
- Improved cholera diagnostic capacity to allow shift to using surveillance data on diagnostically-confirmed cholera cases for targeting campaigns

Improved diagnostic capacity enables more efficient preventive vaccination

- Preventive campaigns w/ high coverage will likely end cholera transmission in many areas but cannot confirm without cholera diagnostic capacity
- If diagnostic-confirmed cholera data were already widely available for targeting, the estimated number of hotspots where preventive campaigns are needed could be cut by roughly half
- This estimated efficiency will increase in each round of repeat campaigns



Refs: Xu H, Lee E, Azman A. The value of cholera surveillance for OCV decision making. September 2021. Unpublished.

Peak CM, et al. Prolonging herd immunity to cholera via vaccination. PLOS Neglected Tropical Diseases. 2018.

Current cholera diagnostic market status

- Culture is mainstay but major gaps in availability, logistical & technical challenges to scale-up
- Rapid diagnostic tests (RDTs) are potentially the most practical and cost-effective options for addressing surveillance questions relevant to Gavi vaccination programmes
- Currently no validated commercially available RDTs
- Several promising cholera RDTs are commercially available & WHO PQ standards exist
- PCR tests are a viable alternative to culture and RDTs - but expensive & complicated
- Validated multiplex PCR tests available

Potential cholera diagnostic testing deployment

- Gavi-funded cholera diagnostic support would be aimed primarily at supporting continuous surveillance for cholera in hotspots identified from surveillance data on suspected cholera cases
 - Strategy to keep volume of testing manageable
 - Strategy to determine prevalence of cholera against a specified threshold
 - Limited use of support for other purposes, e.g., outbreak detection, retaining primary focus on targeting OCV preventive campaigns

Potential Gavi cholera diagnostic goals by 2025

Market shaping: At least two validated, commercially available tests of a novel type, e.g., RDT

Decision impact: Use or systematic collection of data for use of novel diagnostic results in applications for Gavi support

Thank you



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