Rotavirus Vaccine Options: A Mixed-Method Study Design to Understand Stakeholder Preferences

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Background

Rotavirus accounts for 120,000-220,000 under-five deaths annually, the majority occurring in in low-income countries (LMIC). Hygiene and water quality interventions do not adequately prevent rotavirus. Rotavirus vaccination is the most effective strategy to protect children from disease. Four live oral rotavirus vaccines (LORV) are currently available but show low (40-60%) efficacy in low-income populations. A non-replicating rotavirus vaccine (NRRV) in phase 3 trials may have greater efficacy and lower cost compared to LORVs. LORVs and NRRV also differ in mode of administration, schedule, number of doses, storage requirements, etc. Understanding stakeholder perceptions about these differences and preferences for alternative vaccines and characteristics can inform country-level decision-making, global and national policy, and rotavirus vaccine markets. However, new vaccine introductions in LMICs often occur without systematic assessment of what stakeholders value and prioritize. PATH is implementing a study to address this gap as relates to rotavirus vaccine.

Methods

A mixed-method study will assess rotavirus vaccine perceptions and preferences among global-, national-, and service-level stakeholders. Interviews will focus on comparing currently offered LORVs, a stand-alone NRRV option, and a mixed LORV-NRRV schedule. ≥25 global stakeholders selected from multi-lateral, donor, academia, and technical assistance organizations will be interviewed to explore issues and concerns from these various perspectives. Individual interviews with 60-90 national stakeholders (NS) and ≥90 health providers (HP) from six LMICs will be conducted using parallel semi-structured guides. NSs will be purposively selected for maximum variation in key national roles and technical areas. HPs will be selected for role homogeneity: vaccine delivery at primary care level. NS and HP interviews will include systematic elicitation techniques (rank order and paired comparison tasks) to determine vaccine preference patterns and desirability of specific vaccine attributes. Open-ended questions will be used to understand underlying reasons and rationales for stated preferences. Quantitative data will be analyzed using descriptive statistics. Free-text data will be analyzed using deductive and inductive approaches and compressed to conduct qualitative comparative analysis.

Results

Data collection is planned late-2019/early-2020 with results available on or before December 2020.

Summary

Findings from the study will inform country-level decision-making and global and national policy for rotavirus vaccines. The mixed-method approach may also benefit other research strategies to assess vaccine feasibility and preference studies.