

Assessing rotavirus vaccination program costs in Palestine

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Introduction

The Palestinian Ministry of Health (PMOH) has been providing ROTARIX to children in the West Bank and Gaza since 2016 with support from the Rostropovich-Vishnevskaya Foundation. Concurrent with the PMOH taking responsibility for financing the rotavirus vaccine procurement, the decision was made to shift to the newly prequalified ROTAVAC.

The objective of this study is to assess the cost components of rotavirus vaccination in Palestine, specifically supply chain and service delivery costs, procurement-related costs (excluding the price of vaccine and commodities), and introduction costs, for ROTARIX and ROTAVAC.

Methods

We evaluated the incremental financial and economic costs of supply chain, service delivery, procurement, and introduction costs. To assess supply chain and service delivery costs, primary data collection was carried out in West Bank and Gaza using structured questionnaires. Procurement costs data were collected from the local UNICEF office. Introduction costs were collected from the PMOH immunization team and its partners. Introduction costs were collected for the introduction of ROTARIX vaccine in 2016 and for the switching from ROTARIX to ROTAVAC in 2018.

Results

In Palestine, we estimate that supply chain and service delivery economic costs amount to US\$2.70 per dose for ROTARIX and \$2.34 per dose for ROTAVAC (10-dose presentation), mainly driven by differences in volume per dose. Introduction economic costs of ROTARIX were higher than switching costs to ROTAVAC. While international transportation costs were fairly similar despite the difference in vaccine volume, local transportation from the port of entry to the central store differed, from \$0.03 per dose for ROTARIX to \$0.02 per dose for ROTAVAC.

Conclusion

The recurrent cost to deliver a single dose of ROTAVAC was less costly than a single dose of ROTARIX. Switching costs were lower than introduction costs because of the shorter training time, leveraging learnings from the initial introduction training. These estimates can inform parameters for economic evaluation as well as inform decision-makers when comparing different rotavirus vaccines.