The Switch Series:
Integration Lessons from a Compulsory Rotavirus Vaccine Switch in Ethiopia

Background

Ethiopia introduced the rotavirus vaccine (RVV) into the national immunization program in 2013 using ROTARIX. In 2023, RVV coverage was estimated to be 70 percent. The government aims to achieve 95 percent coverage.[1,2]

In July 2023, Gavi informed partners of manufacturer-related supply issues related to ROTARIX, made by GlaxoSmithKline. This product shortage began in late 2023 and persisted into 2024. As a result, Gavi identified a subset of countries requiring a vaccine product switch, including Ethiopia. The RVV product that was available for affected countries, ROTASIIL-Liquid (ROTASIIL), is a three-dose schedule, presented in two-dose vials (as compared to ROTARIX's two-dose schedule).

The Ethiopian Ministry of Health (MOH) accepted the unplanned, compulsory RVV product switch in August 2023 because the remaining stock of ROTARIX was not sufficient to meet the population's needs for more than six months. Although it was anticipated to begin in December 2023, the first phase of the switch ultimately took place in March 2024. JSI, through a Gates Foundation-funded project, provided system support to the MOH from August 2023 to April 2025 to enable the switch at national and subnational levels.

Service integration—the coordinated delivery of multiple health interventions through a single platform—was a key strategy prioritized by the MOH to ensure the successful rollout of the RVV switch. Driven by limited time, and financial and human resources, the MOH combined RVV switch with other immunization efforts, including those for human papillomavirus (HPV) multi-age cohort vaccination, the introduction of the second dose of inactivated polio vaccine (IPV2), COVID-19 vaccination, and various catch-up activities. This collection of four case studies illustrates how Ethiopia prepared for and implemented the RVV switch. **This case study highlights the value of and opportunities for integration of routine immunization activities based on lessons learned from the RVV switch.**

[1] https://immunizationdata.who.int/global/wiise-detail-page/rotavirus-vaccination-coverage?CODE=ETH&ANTIGEN=ROTAC+ROTA1&YEAR=
[2] National immunization evaluation research

Table 1: Opportunities for integration during a vaccine product switch

Activity	Challenges
Decision-Making and Planning	Although this was a forced switch that did not follow the MOH's usual decision-making processes, the RVV switch planning was integrated into regular planning meetings for other immunization activities. This streamlined the planning process, helped identify opportunities for integration, and supported routine coordination without planning/holding new meetings. As more new vaccines and products are introduced, schedule alignment must be taken into consideration in the planning process. The ROTASIIL schedule was aligned with the pentavalent vaccine schedule, making it much easier to integrate activities for those vaccines. Considering these overlaps enhanced logistics, vaccine distribution, training, and service delivery, with benefits to health workers and clients. Microplanning is a key opportunity to align immunization programs with other health services - coordinating activities, resources, timing, and service locations.
Training	Training offers a valuable opportunity for integration—not only because it is cost-effective, but also because many core competencies and knowledge areas overlap across vaccine types. By focusing on the most essential, cross-cutting information health workers need, training programs can encourage critical thinking, streamline content, and create more efficient, impactful curricula. While this is an important opportunity, care must be taken to ensure enough time is allocated to different topics and facilitators take care to ensure quality is not compromised. Guidance for cascade training may help with consistency and quality assurance.
Monitoring and Supportive Supervision	There is an opportunity to strengthen monitoring and reporting systems to better support holistic service integration. For instance, catch-up vaccination efforts do not introduce new vaccines but target new age groups, requiring different indicators. Aligning and updating existing reporting systems across immunization and other relevant health services can help standardize indicators and improve coverage of preventive care for more people. Supportive supervision is important for monitoring and performance improvement. Integration can help minimize the number of visits and improve coordination across programs.
Service Delivery	There are critical opportunities to integrate service delivery in order to reduce missed opportunities for vaccination. In Ethiopia, for example, vaccines like COVID-19 were initially delivered through standalone campaigns, but are now integrated into routine immunization alongside other health services for both adults and children. Even when campaigns focus on a single vaccine—such as measles—there is still potential to integrate additional services. These may include zero-dose identification and vaccination, maternal health efforts like obstetric fistula screening and referral, and child health services such as vitamin supplementation. Additionally, the service delivery of ROTASIIL vaccine was aligned with other antigens like the Pentavalent vaccine delivery schedule, and the same service delivery strategies were implemented.

Integration in the Context of the RVV Switch

From preparation to implementation, the integration of switch activities into routine immunization activities was a critical strategy to allow for a cost-effective and efficient RVV product switch. The key areas of integration included:

Preparation:

- National and regional-level training-of-trainers on RVV, cascaded to lower levels of the health system, was integrated with training for HPV vaccination (multi-age cohort and single dose switch), COVID-19 vaccine integration, catch-up activities, and IPV2 introduction. This enabled the MOH to leverage resources from other activities and minimize time and travel required. To maintain quality in integration, the MOH had to prioritize essential information participants needed to know to implement the switch.
- In Ethiopia, the MOH conducts a readiness assessment to evaluate program opportunities, identify gaps, and prioritize actions to enable readiness of vaccine delivery. The MOH conducted this assessment for the RVV switch at the same time as that for IPV2 introduction, efficiently deploying resources to provide tailored support for the product switch and new vaccine introduction at the sub-national level.

Implementation and Post-Switch Monitoring

- Distribution could be integrated across vaccines because the cold chain management and storage requirements for RVV are very similar to other routine vaccines in circulation. However, there was a need for additional storage capacity—this presents an opportunity as an investment in infrastructure can benefit the whole health system and enable future integrated vaccine services.
- Demand generation and service delivery activities were integrated across vaccines, which supported more efficient use of resources. These activities could be integrated because the schedule for the new RVV product was aligned with existing vaccine schedules (i.e., for pentavalent vaccine).
- Reporting and monitoring tools were updated to include RVV indicators, enabling an integrated approach to monitoring vaccine coverage across antigens. Because of this integration, EPI stakeholders could develop joint work plans, customize tools like supportive supervision checklists to address all program elements, and leverage regular review meetings to discuss the status across programs. This facilitated an integrated approach to supportive supervision of health workers, again more effectively using resources by limiting the number of visits to facilities and better using visits to address challenges that affect more than one vaccine or health program. Post-switch, this approach remains essential to not only monitor progress toward higher coverage, but to also leverage the RVV switch experience for EPI planning for the upcoming years.

Key Considerations for Integration

While the integration of immunization and other health services can improve uptake, efficiency, cost effectiveness, and intention to use services, it is important to consider which services or activities to integrate. Below are key questions to consider when deciding whether or not to integrate activities and services.

Decision-making and Planning

- Would integration of activities or services align with and/or support priority policy agendas?
- Can existing policy and coordination mechanisms be used for integrated decision-making?
- Do existing tools and processes support integrated activity planning?
- Did the selection of the vaccine product include considerations for integration, such as schedule alignment with other health services?

Resources and Operations

- Would integrating services or activities result in more efficient use of human and financial resources? Would it reduce the burden on existing human resources?
- Can sufficient time be allocated to train and support human resources to deliver services in an integrated manner?
- Can current infrastructure and operational capacity, including that of the supply chain system, enable and support integration?

Service Delivery

- Can integrating the delivery of services help reach priority populations? Are the services available the ones that the population needs?
- Can the immunization service or activity be effectively delivered through existing service delivery strategies and mechanisms?
- Will integration improve the quality of services delivered?
- Will integration improve the client's service experience?
- Are there opportunities for integrated service delivery during outreach, campaigns, or supplemental immunization activities?