HAPPI
PARTNERSHIP FOR ACCELERATING HPV VACCINATION

The Operational Impact of Switching from a Two-Dose to a One-Dose HPV Vaccination Schedule:

Lessons Learned from Burkina Faso, Ethiopia, and Solomon Islands

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BACKGROUND

In April 2022, the World Health Organization's (WHO) Strategic Advisory Group of Experts on Immunization recommended that countries adopt a single-dose schedule for human papillomavirus (HPV) vaccination, citing evidence that a single dose provides comparable efficacy and durability of protection to the traditional two-dose regimen. This recommendation aims to improve global access to the vaccine, especially in low- and middle-income countries (LMICs), where cervical cancer remains a leading cause of cancer-related deaths among women. The updated WHO guidelines on implementing a single-dose schedule are expected to accelerate progress toward WHO's goal of vaccinating 90 percent of girls against HPV by age 15 by 2030, thereby significantly reducing the global burden of cervical cancer.

As of June 2025, 75 countries have adopted a single-dose HPV vaccination schedule.[1] The single-dose schedule is expected to bring operational efficiencies and lower costs to country immunization programs, including simplifying logistical coordination and reducing the need for outreach sessions.[2] PATH conducted this study on behalf of the HPV Vaccine Acceleration Program Partners Initiative (HAPPI) Consortium to obtain insights into how switching to a single-dose schedule has impacted HPV vaccination programs in LMICs and to gather insights for ongoing program planning and sustainability with a single-dose schedule.

METHODS

Between January and May 2025, PATH conducted 35 semi-structured key informant interviews with national and subnational stakeholders in Burkina Faso, Ethiopia, and Solomon Islands, which included perspectives from vaccinators, community health workers, policymakers, multilateral partners, health facility managers, and community leaders. (Annex 1 provides detailed demographic information about the study participants.) These interviews explored the operational aspects of switching from a two-dose to a one-dose HPV vaccination schedule across key thematic areas of the program, including enumeration (with a targeted focus on out-of-school [OOS] girls), planning, service delivery, and sustainability. Data were coded and analyzed using qualitative thematic analysis.

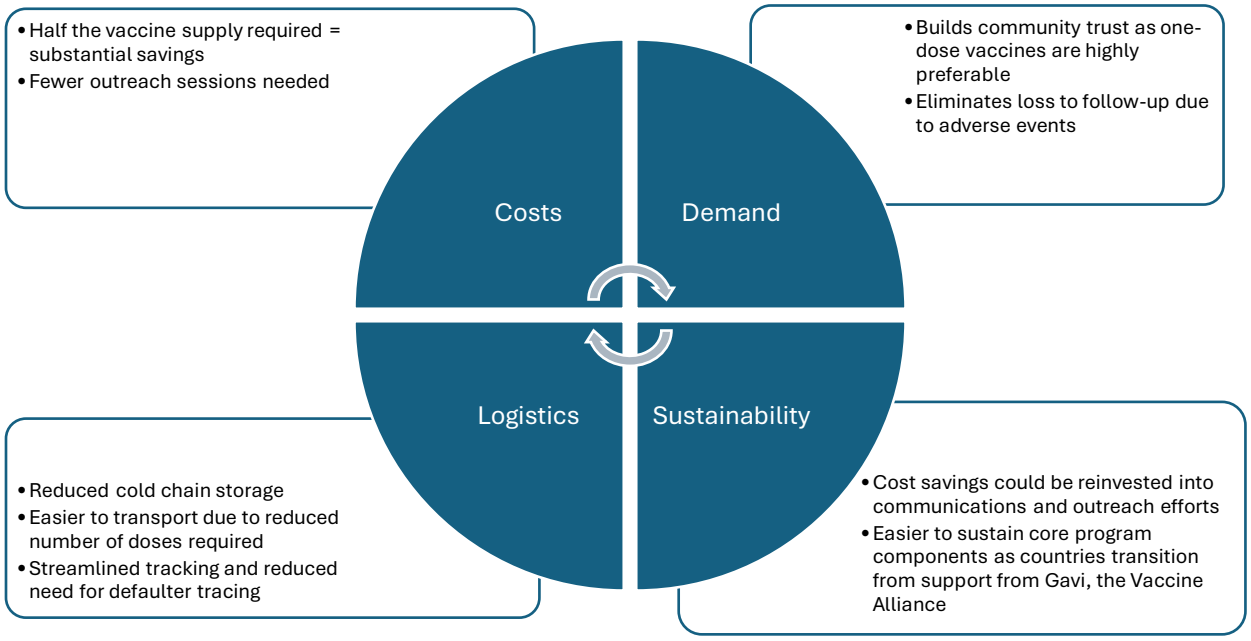
RESULTS

Results across all three countries were strongly aligned and are presented in four main categories: demand generation and coverage, vaccine and human resource costs, vaccine supply and service delivery logistics, and sustainability. Figure 1 provides a high-level summary of the study results from each category.

[1] World Health Organization HPV vaccine programme schedule. Accessed June 4, 2025. https://app.powerbi.com/view?r=eyJrIjoiNDIxZTFkZGUtMDQ1Nv00MDZkLThiZDktYWFlYTdkOGU2NDcwIiwidCI6ImY2MTBiMGI3LWJkMiQtNGIzOS04MTBiLTNkYzI4MGFmYjU5MCIsImMiOjh9.

[2] Single-Dose HPV Vaccine Evaluation Consortium. *Evidence to Inform Decision-Making on Single-Dose HPV Vaccination Policy.* PATH; 2025. https://media.path.org/documents/HPV_Cnsrt_GeneralSummary_2025_R1_web.pdf?_gl=1*h49zkc*_gcl_au*QDE4NDY2NzI2LjE3NDYwMiI1MTI.*_ga*MTM0MTAzNTg4MC4xNzA2NjM4NTAw*_ga_YBSE7ZKDQM*czE3NDg0NDQ0NjkkbzE1JGcxJHQxNzQ4NDQ0NzQ4JGo2MCRsMCRoMA.

Figure 1. Summary of the operational impacts of switching from a two-dose to a one-dose HPV vaccination schedule identified in the study.



Demand Generation and Coverage

Respondents emphasized that single-dose delivery of HPV vaccination increased the likelihood of achieving "fully immunized child" status and reduced losses to follow-up, particularly due to concerns about adverse events following the first dose. With a two-dose schedule, girls in primary school who received their first dose may have gone to secondary schools in another catchment area in the time interval between doses, which made it difficult for health care workers to find them again. Plus, at times, the interval between the first and second dose did not align operationally with the academic calendar.

> *"The first dose is often given in October, when we are still in school, and the second dose is during the exam period." – Health care worker, Ethiopia*

Vaccine and Human Resource Costs

Respondents cited lower costs for the number of vaccines needed, reduced vaccine delivery costs, and less staff time required for second-dose follow-up as significant impacts of switching to a single-dose HPV vaccination schedule, especially in resource-constrained settings. Furthermore, resources saved on transport and other operational costs can be reallocated toward intensified outreach efforts to reach more girls in broader catchment areas, which are especially valuable in remote or hard-to-reach (HTR) locations where it is often expensive and time consuming to travel.

> *"Transitioning from two-dose to single-dose will have a positive impact on the coverage because we will be reaching the out-of-school girls by reducing this factor of geographic isolation and limited access." – Subnational stakeholder, Solomon Islands*

Vaccine Supply and Service Delivery Logistics

Study participants cited more efficient use of vaccine carriers and greater efficiencies in transport with the single-dose HPV vaccination schedule. One noted how it "preserves supply" in dose-constrained environments, as some countries have experienced shortages in supply availability, particularly in remote or HTR areas where vaccine shipments are less frequent due to infrastructure and access challenges. Also, the single-dose schedule allows for more flexibility in terms of outreach approach.

> *"This has made it possible for us to have peace of mind administering the vaccine in areas where there are train stations and marketplaces. We were able to save the energy we otherwise would have used to go to other areas." – Health care worker, Burkina Faso*

Sustainability

Switching to a single-dose HPV vaccination schedule enhances program sustainability for reaching OOS girls by simplifying delivery, reducing logistical burdens, and lowering overall costs. With fewer doses needed, health workers can cover wider geographic areas in a single visit, making it easier to reach mobile or HTR girls. This streamlined approach eliminates the risk of loss to follow-up. By freeing up resources—such as transport, staff time, and cold chain capacity—countries can reinvest in community outreach, enumeration, and engagement strategies tailored to HTR or OOS girls, thereby strengthening long-term equity and coverage.

CHALLENGES

Though there was widespread agreement on the positive impact that a single-dose switch has on reducing costs and streamlining logistics, a few participants noted challenges to be considered:

- **Communication gaps**: Miscommunication about the implications of the schedule switch, especially to communities already primed for two-dose campaigns, was raised as a risk.
- **Equity risks**: Some expressed concern that a single-dose schedule might lead to assumptions that fewer outreach sessions are needed overall, potentially reducing efforts to reach HTR or OOS girls.

OPERATIONAL TAKEAWAYS

- **Prioritize communication:** Clear messaging is essential for health care workers and communities about the rationale and efficacy of the single-dose schedule.
- **Leverage efficiency gains:** Reinvest logistics savings into outreach for missed populations to ensure those hardest to reach are vaccinated.

ANNEX 1. PARTICIPANT DEMOGRAPHICS

Country	Health system level	Sex	Geography (urban, rural, mixed)	Stakeholder role
Burkina Faso (n=10)	National: 2 Subnational: 5 Health facility: 3	Male: 7 Female: 3	Urban: 7 Rural: 2 Mixed: 1	Public health program managers and officers: 4 Clinical and technical health workers: 3 Health promotion and communication professionals: 3
Ethiopia (n=15)	National: 5 Subnational: 6 Health facility: 3 Community: 1	Male: 12 Female: 3	Urban: 8 Rural: 7	Public health program managers and officers: 7 Clinical and technical health workers: 2 Facility-based and local management staff: 4 Specialized technical advisors: 1 Religious leaders: 1
Solomon Islands (n=10)	National: 3 Subnational: 5 Community: 2	Male: 2 Female: 8	Urban: 5 Rural: 1 Mixed: 4	Public health program managers and officers: 6 Facility-based and local management staff: 1 Specialized technical advisors: 1 Religious leaders: 1 Youth leaders: 1

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