

# INTRODUCING HUMAN PAPILLOMAVIRUS VACCINE IN TANZANIA

Cervical cancer is the fourth most common cancer in women globally, with the largest number of cases in East Africa. Tanzania—where cervical cancer is the most common cancer nationally<sup>1</sup>—has one of the highest incidence and death rates on the continent.<sup>2</sup> Infection with human papillomavirus (HPV) is the main risk factor for this cancer. Responding to the global health community's endorsement of cervical cancer prevention by vaccinating girls aged 9–14, the Government of Tanzania (GoT) launched an HPV vaccination initiative in 2014.

The Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC), through the Immunization and Vaccine Development (IVD) unit, conducted pilot demonstration projects in the Kilimanjaro region in 2014 and 2015. The demonstration projects tested the feasibility, acceptability, and coverage of HPV through campaign and routine vaccination strategies. Based on lessons learned from those pilots, the GoT decided to launch HPV nationwide through routine vaccination strategy. A grant was submitted to Gavi, the Vaccine Alliance for funding in May 2017 to support the national rollout of the HPV vaccine into Tanzania's routine immunization program. In April 2018, Tanzania became the seventh African nation to introduce the HPV vaccine into its routine immunization (RI) program, with the second dose administered to the first group of eligible girls in October 2018 (Figure 1).

This brief gives an overview of the HPV vaccine introduction process, highlighting key technical support provided as well as best practices and lessons learned for other countries and programs interested in introducing HPV into their national routine system.

## KEY ELEMENTS FOR A SUCCESSFUL HPV VACCINE INTRODUCTION

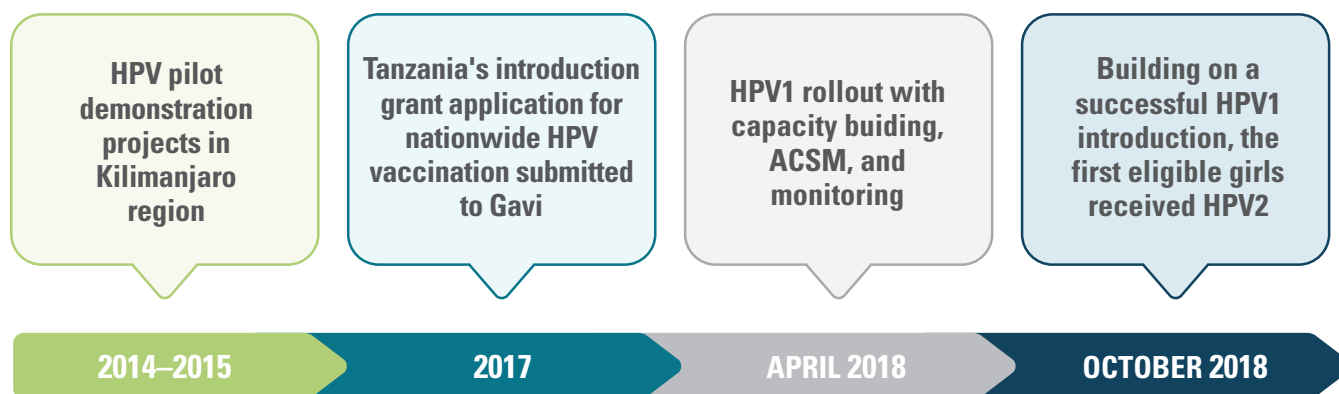
The following describes key components to consider to ensure a successful HPV vaccine introduction and Tanzania's experience managing them.

### Cold chain management

The IVD formed a logistics subcommittee to assess and prepare the cold chain for the HPV introduction, and continued to support improved cold chain capacity and vaccine tracking throughout the introduction process. This included building the capacity of regional- and district-level vaccine managers to monitor and

**Integrating the HPV vaccine into existing cold chain monitoring systems allows for real-time monitoring of supply and increases ability to make adjustments quickly.**

**Figure 1. Timeline for HPV Introduction in Tanzania**



1 World Health Organization (WHO), International Agency for Research on Cancer. 2018. United Republic of Tanzania," fact sheet. Available at <https://gco.iarc.fr/today/data/factsheets/populations/834-tanzania-united-republic-of-fact-sheets.pdf>

2 World Health Organization, Regional Office for Africa. 2018. "Tanzania rolls out vaccination against cervical cancer..." Available at <https://www.afro.who.int/news/tanzania-rolls-out-vaccination-against-cervical-cancer>

### Box 1. Addressing Stockouts of the HPV Vaccine Following Nationwide Rollout

After nationwide rollout, most regions, districts, and health facilities faced HPV vaccine stockouts. To immediately address the stockouts, the IVD sent directives to regional and district managers to redistribute HPV vaccines. In the meantime, JSI worked with the logistics subcommittee to determine the following causes behind the stockouts:

- Trainings for health workers and teachers were short, resulting in insufficient knowledge on the vaccine delivery strategy
- Health workers vaccinated girls who were not yet eligible and girls who were older than 14 years of age
- The public perceived the HPV introduction as a campaign and brought ineligible girls for vaccination as they worried the vaccination would not continue

In response to these challenges, JSI supported the IVD to develop a key information sheet and Standard Operating Procedures on eligibility criteria, the vaccine delivery model, and awareness raising for managers, vaccinators, and teachers. JSI used extended stakeholders/PHC meetings and other platforms to emphasize this information. Finally, JSI helped IVD to re-share HPV vaccine-related TV and radio spots via WhatsApp groups to managers, health workers, and vaccinators, who then shared them with parent and teacher groups.

These strategies helped to avoid stock outs when the next round of girls were eligible for HPV vaccination.

assess cold chain performance. In support of these efforts, JSI helped to integrate HPV into IVD's web-based Vaccine Information Management System (VIMS). The system helps managers to monitor RI data, cold chain equipment (CCE) inventories, vaccine stocks, and related supplies; and thus, make informed decisions for program performance improvement and sustainability. By integrating HPV into VIMS, national, regional, and district managers were able to monitor system functionalities and stock usage for HPV program performance improvement.

#### Training

With HPV vaccination in particular, health care workers (HCWs), teachers, and community leaders all play a key role in registering and

**Training health care workers, teachers, community and religious leaders, and mass media on the importance of HPV vaccination is key to ensuring a successful introduction.**

reaching eligible girls in and out of school. Trainings were conducted with these audiences to emphasize the importance of full vaccination with HPV1 and HPV2. Training and sensitization also included mass media members, and community and religious leaders, to ensure widespread understanding of HPV vaccination as a critical cervical cancer preventive intervention. JSI helped to develop and update materials for training at all levels, plan training sessions, and organize a core group of national-level trainers to initiate cascade-style training that reached all other levels—including regional and district officials, HCWs, and teachers—for a total of over 30,000 people trained nationwide.

#### Cross-sectoral linkages

Collaboration across sectors is an important component to a successful HPV program. From planning to implementation, to monitoring and follow-up, the education sector has been involved at all levels. To enhance cross-sectoral coordination between schools and the health system, JSI leveraged existing and locally-funded stakeholders/Primary Health Care (PHC) sensitization meetings to raise awareness on the national HPV program and regional progress as well as their roles in reaching eligible girls. These platforms also allowed for HCWs and teachers to identify challenges and solutions

### Box 2. Integration of HPV Vaccination into Other Health Delivery Platforms

In collaboration with partners, Jhpiego led activities for integrating HPV vaccination into other health delivery platforms to increase coverage and equity. Upon identifying the HIV/AIDS and Adolescent Sexual Reproductive and Child Health (ASRCH) as potential platforms for integration, JSI provided TA to develop guidance and a curriculum to train supervisors and HCWs on the practical implications for integrated service delivery of HPV, ASRCH, HIV/AIDS, and other health programs. Included in these tools are key integrated communication messages for community awareness and demand creation activities. Integrated Measles Rubella Campaigns in two regions were also used as an opportunity to sensitize stakeholders on practical workable strategies for HPV coverage improvement as well as routine immunization strengthening.



in support of the HPV program together. Following these interventions, HPV coverage in these regions increased. For example, in July 2019, JSI supported the IVD to organize a sensitization meeting in Dar es Salaam. Prior to the meeting, data in Dar es Salaam for January–June 2019 showed coverage of 55% and 24% for HPV 1 and HPV2, respectively. Following the sensitization meeting, the January–August 2019 data showed coverage raised to 85% and 25% for HPV1 and 2, respectively. Efforts continue to engage communities and educators, particularly on the importance of ensuring that girls receive both doses of the vaccine.

### Program monitoring

Continuous monitoring of the program's performance, including through supportive supervision and mentoring to poor performing regions and districts, is essential to increase HPV vaccine uptake. Data gathering was a challenge, in part because data capturing tools were in short supply following the launch. Districts and implementers were advised to print and copy forms and tools, while the MOHCDGEC liaised with partners to produce and distribute the registers and forms to regions and districts facing shortages. Once districts began generating data, JSI supported qualitative and quantitative vaccination data analysis, monthly reviews to assess progress, and the integration of HPV data into routine health program monitoring and quarterly reviews. It is of high importance to continuously improve the quality of data gathering to ensure improvement of HPV coverage for eligible girls and ultimately, to decrease the incidence of cervical cancer and its related morbidity and mortality.

### Sustainability of the HPV program

Funding gaps and delayed disbursement of funds impeded numerous elements of the HPV rollout, resulting in challenges with worker

### Box 3. Assessing the HPV vaccine introduction and its sustainability

The IVD, CDC, and Ifakara Health Institute (IHI) conducted an HPV knowledge, feasibility and costing study from October 2019 until February 2020. CDC and IHI shared the initial study results on the knowledge and feasibility survey with in-country partners in March 2020:

- The HPV introduction in Tanzania was strong.
- It is possible to integrate HPV into the routine delivery system and its incorporation is manageable for the health worker and teacher workload.
- The large-scale training and orientation efforts led to a good understanding of the training and orientation concepts among all groups and high demand and acceptance of HPV vaccine.
- Continuous training or supportive supervision, increased social mobilization efforts, and HPV vaccination budget for increased outreaches and efforts to reach special populations are recommended.

These results will help the country to understand the costs for delivering the HPV vaccine—in different settings and using different strategies—for partially and fully vaccinated/immunized girls and to support the country to plan for sustainability as it graduates from Gavi support.

motivation, IEC dissemination including TV and radio spots, outreach, and intersectoral linkages. JSI provided technical assistance to IVD in conducting high-level advocacy and sensitization meetings to members of Parliament (Service Delivery and Community Development Committee) and MOHCDGEC officials. This TA support focused on advocating for resource allocation to improve HPV coverage and ensure sustainability of HPV vaccination within the RI program. Advocacy for funding to support the different aspects of the HPV program (e.g., outreach sessions, IEC, ACSM, and training) was also needed at regional, district, and facility levels. JSI mentored district and health facility levels to strengthen health facility microplanning and realistic budgeting so that school outreaches and other related

2 Due to school closures for the winter holidays, some eligible girls were missed for HPV vaccination in November/December 2018. Efforts were intensified in several regions to vaccinate girls when the schools reopened in January 2019. This resulted in some catch up for girls from the 2018 target who were vaccinated with HPV1 and HPV2 in January and February (based on their eligibility) and therefore were calculated along with the 2019 targets (resulting in higher percentages for those months).

3 For more information about the CCHP process, see: [Strengthening Comprehensive Council Health Planning to Increase Immunization Coverage: A Pilot Activity in Kagera Region, Tanzania](#).

costs were captured into the comprehensive health facility plans, and later, the Comprehensive Council Health Plan (CCHP) at district levels.

Sustainability includes not only securing funding from both internal and donor sources, but full mobilization of stakeholders at all levels to ensure long-term engagement in the HPV initiative. Training, microplanning, advocacy for funding, and mentoring at all levels aimed at instilling and institutionalizing local knowledge of and support for HPV—at all levels—is a critical intervention to protect girls' and women's health. Participation of all stakeholders in national-level technical working groups and subcommittees, particularly, was meant to embed government-level commitment to the long-term process of establishing, normalizing, and maintaining the HPV program.

## CONCLUSION

While many countries have introduced new vaccines—pentavalent, rotavirus, PCV, and others—in the past decade, HPV vaccine introduction requires different approaches because it targets pre-adolescent/adolescent girls (and not infants). New strategies to reach this population include linking with adolescent health initiatives and programs, communicating to parents, teachers, and girls about the importance of HPV vaccination as a tool to eliminate cervical cancer, and coordinating with partners that have not previously been involved with the Expanded Program on Immunization (EPI). The successful rollout of a unique and new health behavior which is required for uptake of HPV vaccine has required a detailed focus during preparations for introduction and particularly post-launch to ensure sustainability and future coverage with each year's cohort of adolescent girls.

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## LESSONS LEARNED AND RECOMMENDATIONS

The elements below summarize important considerations for introducing and maintaining an HPV vaccination program.



A **strong, well-coordinated technical working group** that includes input from donors, partners, education, and health officials at all levels, HCWs, and community members is fundamental for sustaining HPV coverage.



**High-level political commitment** and **community engagement** are both crucial for a successful and sustainable HPV program. **Continuous advocacy** is needed throughout the early stages of a launch to ensure full understanding of the vaccine's importance and buy-in at all levels.



Successful HPV coverage requires **strong linkages, coordination, and collaboration between schools and health care facilities** to ensure coverage of eligible school girls. **Community involvement** is also vital to ensure coverage of girls who are not in school.



**HPV should be integrated with other health programs**, including immunization campaigns, youth and reproductive health programming, and school health programs, to maximize use of available resources.



**Existing resources**—nongovernment, civil society, and faith-based organizations—**can support routine immunization and help reach out-of-school girls**.



**Advocacy and outreach should be routine**, not only during the introduction period but as part of the routine immunization program, to ensure that girls are always covered as they reach the target age.