

NEW VACCINE, NEW COHORT, AND COVID-19 INTERRUPTIONS:

Kenya's HPV Vaccine Introduction (and JSI's experiences)

Cervical cancer is among the most common cancers in women worldwide, with the greatest burden in developing countries. In Kenya, cervical cancer is the second leading cause of cancer-related deaths and the second most common cancer among women.¹ In January 2019, as part of a strategy for preventing and reducing the burden of cervical cancer, the Kenya Ministry of Health (MOH)—through the National Vaccines and Immunization Programme (NVIP)—began preparations to introduce human papillomavirus (HPV) vaccine within its routine immunization schedule. The target for immunization is a new cohort: 10-year-old girls.

Kenya launched the vaccine introduction following a 2013 demonstration project conducted in Kitui County. The initial school-based approach achieved high coverage among 8,455 school girls and 166 out-of-school girls, but the MOH judged this approach unsustainable because of the high implementation cost.

The current strategy—which involves close collaboration between the MOH and the Ministry of Education (MOE)—is to provide 10-year-old girls with a two-dose HPV vaccine regimen, with dose 2 delivered six months after dose 1. The facility-based strategy involves vaccination provided by health care workers (HCWs) at facilities—with advocacy, communications, and social mobilization support through communities and schools.

The Kenya MOH (including involvement of the First Lady) launched the nationwide HPV vaccine introduction in October 2019. With financing from Gavi, the Vaccine Alliance, John Snow, Inc. (JSI) provided technical assistance with the HPV vaccine introduction preparations at the national level and post-introduction support focused on four counties in Central and Western Kenya: Kiambu, Kisumu, Nakuru, and Siaya. Box 1 highlights six key components to JSI's technical support.

Introducing a new vaccine, for a new cohort, means addressing new, unanticipated challenges.

¹ World Health Organization (WHO). 2018. International Agency for Research on Cancer (IARC): Kenya. GLOBOCAN: 2018. Lyon, France: WHO IARC. Available at <https://gco.iarc.fr/today/home>. Accessed 11 December 2020.

Box 1.

JSI's Six-Component Support for HPV Introduction



Supply chain: Supporting vaccine quantity calculations and distribution, and integrating HPV within the stock management system.



Coordination: Assisting with coordination between the MOH, the NVIP, HPV subcommittees, the education sector, partners in the American Cancer Society, and other CSOs/NGOs.



Communication: Contributing to development of information, education and communication materials, engaging selected stakeholders, media interviews, participating in stakeholders' meetings and outreach.



Capacity building: Building skills and supporting cascade training to reach all system levels; conducting supportive supervision visits.



Monitoring and evaluation: Coordinating monthly analysis of HPV vaccination data.



Post-introduction support: Monitoring linkages among project partners and government entities, helping to address challenges.





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- Immunization Project Officer Lucy Kiarie

Unfortunately, the COVID-19 pandemic interrupted the rollout of the vaccine, beginning in late March and April 2020. Nevertheless, the MOH, MOE, JSI and a variety of partners and stakeholders continued implementation, with constant learning and adjustment. This brief—with insights from JSI's three Kenya-based technical staff—describes the experience of planning and implementing the HPV vaccine introduction amidst COVID-19 in Kenya.

TARGETING—REACHING A NEW COHORT OF SCHOOL-AGED GIRLS

"The first time we did microplanning and mapping, there were a lot of challenges," says Dr. Isaac Mugoya, JSI's Regional Immunization Technical Officer based in Nairobi. "This is not a population for which specific interventions exist. At individual schools within each facility's catchment area, there are no materials for this cohort."

"Getting the target right for this population is not easy; and it requires a bit more consensus and coordination with partners than I thought," Isaac recalls. The NVIP, JSI and partners first turned to MOE data to obtain targets. However, these data were incomplete, requiring further planning at the sub-county and facility levels. Isaac notes, "We worked with the teachers. Working with the schools in collaboration with the facilities, we got an idea of how a facility could vaccinate a certain number of girls from schools within the facility catchment area." Given varying data reports in different counties and system levels, the NVIP, JSI, and other partners conducted micro-planning to improve data verification at the school and

facility levels. They together forged a micro-mapping strategy that worked with the complex local context and enabled appropriate targeting.

EXPANDING THE STAKEHOLDER POOL

Given the new HPV vaccination cohort of 10-year-old girls, the introduction required a broader group of stakeholders beyond those who usually are engaged for infant vaccination. "The NVIP brought in the MOE, and some of the school health teachers and school heads," says Immunization Project Officer Lucy Kiarie. "We're also working with stakeholders in adolescent health, because they can work with the 10-year-olds."

Similarly, this was an opportunity to build knowledge and capacity for health workers, teachers and community health volunteers. "We strengthened the MOE and MOH programs, and improved coordination between the two ministries," Lucy says. "The NVIP also trained the school health teachers and head teachers to communicate with the parents. And, since not all girls were in school, we used community health volunteers (CHVs) to sensitize the community about bringing girls in for HPV [vaccines]. Some counties have a strong connection to these CHVs."

INFORMING THE COMMUNITY EARLY AND CONTINUALLY ENGAGING WITH THEM

Communication was especially critical to the HPV vaccine launch, given the new cohort. The project took part in media outreach and radio and television talk shows, participated in multi-media roundtables, co-created targeted materials on the HPV vaccine, and conducted campaigns on social media. The project also engaged with new partners with experience in cancer prevention (such as the American Cancer Society and Women for Cancer) to help build demand, trust and share information on HPV vaccination.

Amos Chweya, JSI's Regional Immunization Logistics Officer, cites the need for early communication in communities as a major lesson. "During planning meetings, one of the program managers said, 'Wait till the vaccine is available—the people will come.' But that is not what we saw." Though some parents embraced the HPV vaccine quickly, community response was initially mixed. Misperceptions about the HPV vaccine kept some parents from bringing their girls to facilities. "It would have been better to address the concerns of church leaders and community leaders early, but we had to address those issues after the introduction," Amos says.

JSI responded to initial HPV vaccination hesitation by encouraging and supporting engagement with local leaders (such as teachers and church pastors), and building discussion about HPV into community events. "In some counties, we [encouraged EPI nurses and health promotion officers to visit] churches tell the congregations about the HPV vaccine—and also trying to dispel some of the misperceptions about it, such as that the vaccine interferes with fertility," Lucy says. "We also [brainstormed how to sensitize] community leaders, so that they could talk about the vaccine during barazas (community meetings). In some instances, health workers were also invited to talk directly to the communities."

From January through late February 2020, these strategies contributed to HPV vaccine coverage improvement in these Counties, as shown in Table 1. "We began seeing a strong demand for these services,"

Maintaining the HPV introduction in the context of COVID-19 required innovation to secure vaccine supplies—and yielded lessons for the future.

Lucy says.² However, despite these efforts, the COVID-19 pandemic had a dramatic impact on HPV vaccine services and uptake from March and throughout most of 2020, as seen in Tables 1 and 2 (on HPV second dose).

SECURING SUPPLIES THROUGH AVAILABLE MEANS

Despite the service, travel, and supply disruptions that followed the COVID outbreak, the program was able continue providing vaccination services.

"Before COVID, most counties had started to reach more girls, after addressing their challenges," Amos says. "Then COVID came and everything went down, and it will take some time to change this. There was cancellation of flights... especially affecting [delivery of] three vaccines for Kenya, including HPV vaccine. Now we are using cargo flights, and we are able to ship vaccines."

Table 1. Number of HPV1 Doses Administered in Kiambu, Kisumu, Nakuru, and Siaya Counties in Kenya, October 2019–November 2020

	2019			2020										
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Kiambu	608	1219	614	1312	3877	10143	126	217	113	228	244	262	93	587
Kisumu	58	473	336	1539	1070	779	115	144	45	629	133	158	89	430
Nakuru	8544	1684	463	2013	2317	1364	147	330	612	422	326	501	558	2239
Siaya	2354	789	4255	2347	1830	112	232	208	540	863	874	766	1261	

Table 2. Number of HPV2 Doses Administered in Kiambu, Kisumu, Nakuru, and Siaya Counties in Kenya, February 2020–November 2020

	2020									
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Kiambu	6	4	190	408	438	451	829	1114	1079	708
Kisumu	1	9	21	173	77	319	291	179	51	193
Nakuru		31	754	1190	742	620	615	456	355	1088
Siaya		28	270	660	473	805	922	856	706	1411

Source: KHIS2

² The number of HPV1 doses administered nationwide fell in April 2020 due to COVID-19-related school closures and social distancing policies, which affected routine immunization services overall.



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**- Regional Immunization Technical Officer,
Dr. Isaac Mugoya**

The pandemic affected the entire immunization program, including HPV activities, in multiple ways. “One, clients are unwilling to come and get their daughters vaccinated, because health facilities are considered high-risk places,” Isaac says. “Two, staffing—when things were normal we were already understaffed. With COVID, many health staff stopped vaccinating so that they could participate in prevention and control of COVID. Three, we’ve seen some small facilities closing, including private facilities, and some of these also offer immunization. Also, initially we had a challenge getting the vaccine to the girls, but we’ve overcome that and now we think we have enough stock.”

MAINTAINING COMMUNICATION INITIATIVES AND VACCINATION SERVICES

Uptake of HPV vaccine (as shown in Tables 1 and 2) continued despite COVID-19, as Kenya’s health care system began its slow recovery. A major lesson from Kenya’s HPV introduction, Isaac says, was the need to keep communication going to the greatest extent possible, even in the face of outbreaks. “We still have a lot of work to do in terms of communication. The discourse on HPV was [strong] during the intro period, but we have not sustained it.”

Another challenge was that in the interim while the epidemic was dominating the national discourse, other types of messages about HPV began to undermine the HPV work. “This isn’t a new lesson,” Amos says, “but I’ve seen that a lot of social factors can make a good program face failure, because of lack of information.”

Isaac further elaborates, “Not everyone is convinced that the vaccine is safe, because people consume a lot of information from informal media and social media. And some of the information that goes through those media has not been vetted, it’s not justified, but people have no way of knowing that. So I think we have more to do in terms of communicating about HPV.”



It is possible to introduce new vaccines in a new cohort, despite major disruptions, but it requires continuous effort and a deliberate focus on remaining flexible.

LEARNING IS A TWO-WAY EXCHANGE

Vaccine introductions involve training for the local providers and officials who deliver and manage the vaccine. Lucy Kiarie highlights that every stage of the HPV introduction was unique. “This has been a learning process from the planning phase to now. I’ve visited counties that have introduced the vaccine and seen how one county faces challenges another county B doesn’t face,” she says. “It’s important to remember how much project beneficiaries have to offer... You see that people understand [their own] context and can come up with solutions to think through and try. I’m happy that I didn’t have definite answers [to challenges] because this job is all about working with people all the time, and trying to improve, one step at a time.”

Lessons for Other Countries on HPV Vaccine Introduction

While Kenya and many countries have introduced new vaccines for infants in the past decade (e.g. pentavalent, rotavirus, PCV, and others), HPV vaccine introduction requires tailored approaches to reach preadolescent/adolescent girls. Countries that are introducing HPV vaccine are learning that these lessons also offer an innovative blueprint for future life-course vaccinations. Below are some key considerations for a successful HPV vaccine introduction (as well as more broadly):



The HPV vaccine introduction in Kenya has made progress, despite huge challenges. “We have a vaccine that prevents a very serious problem,” says Isaac, adding, “A lot of people don’t understand what cancer is. I do understand that. For me to see the HPV vaccine being introduced to prevent such a problem makes me very proud, and especially that I’m part of this work. I think I have a greater drive to advocate for the vaccine, to make sure that as many girls as possible are vaccinated.”