



# HPV Vaccine Introduction in Indonesia

Findings from Key Informant Interviews



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Indonesia is an upper-middle-income country<sup>1</sup>, home to the fourth largest population in the world<sup>2</sup>, that has made significant strides to improve health over the past decade. Progress has included the 2014 introduction of a national health insurance scheme, *Jaminan Kesehatan Nasional* (JKN), and subsequent steps toward the ambitious goal of achieving universal health coverage (UHC). Although this has successfully expanded health care, obstacles related to health inequities remain, and there is an urgent need to address these barriers in order to ultimately improve access to and increase coverage of primary health care interventions<sup>3</sup>.

In 2020, cervical cancer was the second most common cancer among 15–44-year-old women in Indonesia<sup>4</sup>. Each year, approximately 37,000 new cases of cervical cancer are diagnosed in the country and 21,000 cervical cancer-related deaths occur<sup>4</sup>. The mortality rate due to cervical cancer has steadily declined in Indonesia since 2000 but remains high due to low coverage of cervical cancer screenings and poor uptake of immunization to protect against human papillomavirus (HPV), the leading cause of cervical cancer<sup>5</sup>.

In step with WHO's launch of a global strategy in 2020 to eliminate cervical cancer as a public health problem<sup>6</sup>, Indonesia has announced plans to introduce nationwide HPV vaccination to reach all adolescent girls in late 2023. An HPV vaccine pilot program was successfully implemented in 2017 and achieved vaccination coverage of at least 90% in selected districts<sup>7</sup>. However, there are still cultural and logistical challenges that must be addressed to ensure a successful launch and sustained coverage levels after national introduction, especially since two million girls will need to be vaccinated each year.

In 2023, the International Vaccine Access Center (IVAC) at the Johns Hopkins Bloomberg School of Public Health conducted a series of key informant interviews (KIIs) to identify important facilitators and potential barriers to nationwide HPV vaccine implementation in Indonesia. The goal was to examine the role of vaccine advocacy and identify advocacy strategies that may move HPV vaccination forward. Interviews were conducted with stakeholders who represent a wide range of organizations and authorities in Indonesia. The valuable views and insight gathered from this diverse group inform this case study about the context of HPV vaccines in Indonesia to guide the discussion about essential next steps for HPV vaccine advocacy.

## Findings

Respondents were selected using a snowball sampling approach, and a total of six semi-structured interviews were conducted from March to May 2023.

All respondents were familiar with the national government's commitment to scale up HPV vaccination in the near future but identified concerns which have not yet been fully resolved, including issues related to financing, logistics, and political will at the local level, for example. Respondents uniformly agreed that population-level prevention of cervical cancer should be prioritized in the country and that HPV vaccines should be made available to all girls in Indonesia, though they acknowledged that the interplay of complex factors may influence the success and long-term sustainability of the program. Respondents were asked to describe factors that could either facilitate or hinder HPV vaccine introduction and uptake in Indonesia, as well as areas where advocacy efforts would be most effective.

## Enabling Factors for HPV Vaccine Introduction & Uptake

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High-level political commitment was identified as one of the most important drivers for nationwide HPV vaccine introduction. A few respondents mentioned that the discussion around HPV vaccination in Indonesia did not move forward until the new Minister of Health was appointed in 2020, though the health benefits of HPV vaccines had been known for years and the country's NITAG had already recommended vaccine introduction. One NGO representative noted that the support of the new Minister was instrumental in "renewing momentum ... to accelerate the HPV introductions."

*"In my opinion, the most important decision maker in Indonesia, in terms of vaccination, or especially HPV and other vaccination policy, is the Ministry of Health or the Minister itself."*

– Health economist and contributing member of the Indonesian Technical Advisory Group on Immunization (ITAGI)

One NGO representative added that although the current Ministry of Health is committed to HPV vaccine introduction, it is critical for immunization advocates to "keep HPV on the agenda, because there's always competing priorities." It was acknowledged that as a middle-income country, Indonesia is also on track to introduce other new vaccines to address vaccine-preventable diseases in the country. The addition of these vaccines, namely rotavirus vaccine and pneumococcal conjugate vaccine (PCV), as well as any unexpected health crises due to natural disaster or outbreak, could interfere with the nation's capacity to manage HPV immunization activities and could impact vaccine coverage. The disruption of health system functioning and impact on vaccination coverage caused by the COVID-19 pandemic was mentioned as an example.

Respondents also identified several important enabling factors that may help with uptake once HPV vaccines are introduced nationwide. They mentioned that the HPV vaccination program can leverage the existing school-based program that already delivers routine immunizations to children throughout the year and typically achieves high coverage rates. This system is generally accepted by the public, and delivery of routine childhood immunizations has relied on this program as an efficient way to reach populations in need. School enrollment is generally high in most parts of the country and this platform could efficiently reach the cohort of adolescent girls within the WHO recommended target ages of 9–14 years old.

*"The system is already there. It's built. It's ready. The HPV vaccination is just – for them, it's another vaccination to add on the list of routine vaccination."*

– HPV researcher

## Barriers to HPV Vaccine Introduction & Uptake

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Religion and faith-based principles were featured prominently as concerns which may become barriers that limit uptake of HPV vaccines in Indonesia if they are not promptly addressed. As Indonesia has a predominantly Muslim population, engaging Islamic social organizations and religious leaders was instrumental in managing the country's COVID-19 response, particularly for supporting vaccination efforts<sup>8</sup>. As HPV vaccines will be delivered primarily through schools, one NGO representative noted that religiously affiliated private schools may be more hesitant than public schools to encourage HPV vaccination. An HPV researcher echoed these concerns and noted that during the HPV pilot program, vaccine coverage was observed to be slightly lower in these faith-based school communities. Several

respondents discussed lingering concerns about the status and confirmation of halal certification for the HPV vaccine, and many described the profound influence that religious leaders can have on health-related decision-making, especially for vaccination decisions.

Many respondents also discussed how a general lack of awareness about the risk of cervical cancer and the protection afforded by HPV vaccines may contribute to vaccine hesitancy and reduced uptake. This lack of understanding may further be exacerbated if misinformation begins to circulate. One HPV immunization researcher cited the fairly high coverage rates achieved during demonstration projects as an indication that there was not much concern about educating adolescent girls and their families about the benefits of HPV vaccines. The reach of the HPV demonstration project was not nationwide, though, and many respondents commented about subnational disparities in education and health. Several respondents also spoke about a general lack of knowledge about the connection between HPV and cervical cancer and the potentially devastating impact of the disease. One program evaluator mentioned that unlike diseases like COVID-19, cervical cancer is not easily understood because "we cannot give visualization of the impact of the disease." This lack of knowledge has contributed to the rapid spread of myths and misconceptions, such as the belief that HPV vaccines may have a negative impact on a woman's fertility. Many expressed the need for education efforts targeting various population subgroups, as it is not just adolescents and their parents who will need accurate information about HPV vaccines, but also physicians, health care workers, and even the politicians who are responsible for making immunization decisions.

*"It seems like at the moment, for instance, the Indonesian government seems to see HPV vaccination as not part of the cervical cancer prevention. There is this disconnect, you know. HPV vaccination is for schoolgirls, cervical cancer prevention is for their mothers."*

– HPV researcher

There are also several complex logistical barriers to HPV vaccine delivery that will need to be addressed. Many respondents mentioned that relying on a school-based delivery strategy will also require thoughtful strategies to target out-of-school (OOS) girls. Although previous demonstration projects acknowledged the need for these critical outreach efforts, one HPV immunization researcher noted that this policy was not translated into real-world action or initiatives and therefore was ineffective. HPV vaccination efforts will need to more meaningfully develop plans and implement novel approaches to include OOS girls in plans for service delivery. Additionally, respondents discussed the challenge of delivering HPV vaccines to geographically distant and hard-to-reach communities, such as those living in isolated rural areas that are far away from schools or those living on islands where access can only be achieved by boat.

*"Transporting the vaccine from the factory to the remote area is very struggling. We need multiple type of a transportation mode – we need to across the sea, across the river, across the mountain."*

– Indonesian government official who leads health program planning

### Advocacy Needs to Address

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Advocacy efforts by civil society organizations and other in-country partners are needed to optimize the HPV vaccine program and ensure its long-term success. One critical step is to gain buy-in and solicit public support from religious leaders, both those at the national level as well as at the local level. Both groups of authorities were mentioned as having the ability to positively influence community members'

immunization decisions. Respondents suggested engaging with governmental leadership, including the country's Ministry of Religious Affairs, and having one-on-one conversations with local religious leaders to promote widespread acceptance and adoption of HPV vaccines.

Educational materials about HPV vaccines and cervical cancer will also need to be developed in order to raise awareness of the benefits of HPV vaccination. As HPV vaccines will primarily be delivered through a school-based system, health education and vaccine advocacy efforts should target teachers, school leaders, and other school staff to empower them to communicate openly with students about the benefits, safety, and efficacy of these vaccines.

*"I feel like with capacity buildings, and support of resources, like educational materials that are distributed nationally, or you have a website that you manage nationally and provide the same clear information would be helpful, in some level... for the people and the schools to help educate the girls and the parents themselves, frankly. And that will have a cascading effect of helping schools communicate with people who are against HPV vaccination as well, because then they have information to present."*

– HPV researcher

Respondents highlighted several groups that can serve as messengers to spread awareness of HPV vaccines and increase uptake. At the highest level, the country's President and Minister of Health were cited as influential, with one respondent noting that "in Indonesia, when the President talk, we know that this is emergency, this is very important issue." Social media influencers should also be leveraged to communicate about HPV vaccines, which has been an effective strategy to promote other health interventions in the past, including COVID-19 vaccination. This approach will not reach communities or individuals without access to the Internet, but respondents felt that social media is the most efficient way to communicate about HPV vaccines to as many people as possible.

*"For religious leader, he or she affect their population or their group only. But if we talked about the selebgram or TikTokers, they can reach everybody, almost everybody."*

– Health economist and academic researcher

Lastly, cross-sectoral collaboration and cooperation are needed to effectively implement and promote HPV vaccination. Respondents noted a wide range of stakeholders that will need to be engaged, including the Ministry of Health, the Ministry of Education, and private sector representatives. Indonesia is governed at the subnational jurisdiction for many programs, including health, and one HPV researcher suggested districts would benefit from collaborative learning and opportunities to communicate about their HPV vaccination programs, share lessons learned, and find ways to overcome shared obstacles.

## Next Steps

Conversations with HPV vaccine stakeholders highlighted various facilitators and barriers that may powerfully influence HPV vaccine introduction in Indonesia. To ensure success, there are implementation challenges and logistic considerations that need to be worked out, such as finding ways to distribute the vaccine to those who are not attending school or those who live in geographically isolated areas. Additionally, social mobilization and sensitization efforts are needed to spread awareness about the benefits of HPV vaccines and promote acceptance of this new program among the public. Despite these challenges, enabling factors include political commitment from the current

administration, the strength of the country's existing immunization program, and plans for local vaccine manufacturing, which should help to get the upcoming HPV vaccine scale-up off the ground and headed in the right direction.

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<sup>1</sup> The World Bank. The World by Income and Region. <https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html>

<sup>2</sup> United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022, Online Edition. <https://population.un.org/wpp/Download/Standard/Population/>

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<sup>4</sup> Bruni L, Albero G, Serrano B, Mena M, Collado JJ, Gómez D, Muñoz J, Bosch FX, de Sanjosé S. (2021, October 21). Human Papillomavirus and Related Diseases in Indonesia. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre).

<sup>5</sup> Vet JN, de Boer MA, van den Akker BE, et al. (2008). Prevalence of human papillomavirus in Indonesia: A population-based study in three regions. *British Journal of Cancer*, 99(1), 214–218. <https://doi.org/10.1038/sj.bjc.6604417>

<sup>6</sup> Global strategy to accelerate the elimination of cervical cancer as a public health problem. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO.

<sup>7</sup> Post-Introduction Evaluation of HPV Vaccine Programme in Indonesia. November 19, 2018. Prepared by Health Technology Assessment (HTA) and Pharmacoeconomics Research Center.

<sup>8</sup> Gavi (2022, 5 September 2022). *Islamic organisations promote COVID-19 vaccinations in Indonesia*. <https://www.gavi.org/vaccineswork/islamic-organisations-promote-covid-19-vaccinations-indonesia>