

HPV (human papillomavirus)

First steps to introduce vaccines against cancer – On 17 November 2011, the GAVI Alliance Board announced its decision to take first steps to introduce vaccines against cervical cancer for eligible countries, responding to projected demand from countries and recommendations by the World Health Organization (WHO). The decision leads the way for girls in developing countries to enjoy the same access to HPV vaccines as girls in developed nations.

Quick Facts

- Approximately 275,000 women die every year from cervical cancer. Over 85% of those deaths occur in developing countries, where women often lack access to cervical cancer screening and treatment.
- Human papillomavirus (HPV) causes virtually all cervical cancers. It is highly transmissible and infection is very common.
- Safe and effective vaccines protect against HPV types 16 and 18 which cause about 70% of cervical cancer cases.
- Vaccination against HPV is effective when done before a person is infected.
- In June 2011, one manufacturer announced it would provide the HPV vaccine to GAVI at US\$ 5 per dose.

Growing burden of cervical cancer

Without changes in prevention and control, projected global estimates of cervical cancer deaths are expected to rise to 430,000 per year by 2030. Virtually all those deaths will be in developing countries.

Comprehensive approach to prevention

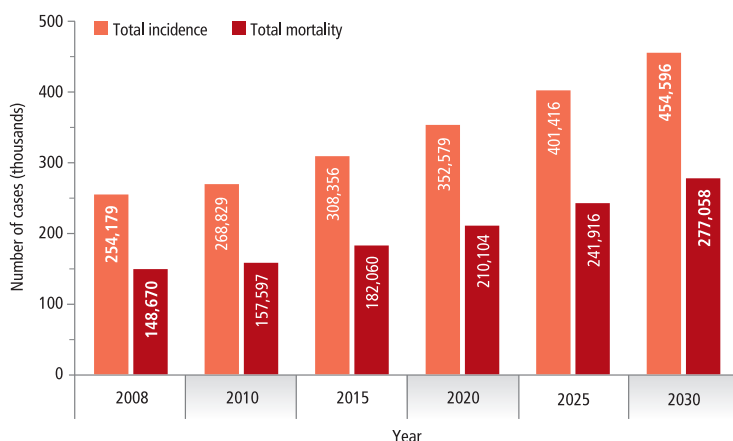
Vaccination against HPV is only effective before a person is infected with the target virus types. Immunising girls before the initiation of sexual activity, that is before first exposure to HPV infection, is a key strategy to prevent cervical cancer.

The World Health Organization recommends HPV vaccination of girls aged 9-13 years through national immunisation programmes in countries where cervical cancer constitutes a public health priority and where vaccine introduction is feasible, sustainable financing can be secured and the vaccines are considered cost-effective.

Although HPV vaccines are expected to significantly reduce the incidence of and mortality due to cervical cancer, they do not protect against all cancer-causing HPV types. However, cervical cancer is preventable even among unvaccinated women if pre-cancerous lesions are detected and treated early. Over the past few decades, routine screening has dramatically reduced cervical cancer morbidity and mortality in the industrialised world. The vaccination of girls aged 9-13 years, coupled with screening and treatment of women, is the most effective strategy to reduce the number of cervical cancer cases.¹

The highest burden of cervical cancer mortality falls on developing countries where screening and treatment services are often lacking.

Increasing cervical cancer cases and deaths in GAVI-eligible countries



Source: Based on GLOBOCAN database www.globocan.iarc.fr and GAVI-eligible countries. Note: GLOBOCAN database does not include information for Gambia or Sao Tome y Principe

¹ The World Health Organization, the Alliance for Cervical Cancer Prevention, the Cervical Cancer Action coalition and UNFPA, recommend comprehensive cervical cancer prevention plans that include both vaccination of young girls and screening and treatment of women.

HPV vaccines

Two HPV vaccines have been licensed in over 100 countries, many of which are GAVI-eligible. Both have been prequalified by WHO for purchase by UN agencies. In clinical trials, the vaccines were found to be safe and highly effective in preventing persistent HPV infection caused by types 16 and 18.

Both vaccines require three doses given over six months. The vaccines have been proven to remain effective for at least five years when three vaccine doses are given, but the protective period is likely to increase as further data are analysed. Research is ongoing to determine if fewer doses will provide adequate levels of protection.

HPV vaccination challenges

One challenge to the delivery of HPV vaccines is that many developing countries do not offer routine health services for girls in the 9-13 year age group. Initial experience in offering HPV vaccination at schools in Africa, Asia and Latin America has been encouraging. Lessons learnt documents are available through the Reproductive Health Outlook Cervical Cancer Library (www.rho.org).

GAVI's market shaping response

In 2008, the GAVI Alliance Board prioritised support for HPV vaccines as part of its vaccine investment strategy, which identified vaccines that would have the biggest impact on the disease burden in developing countries. However, due to financial constraints at the time of the Board decision, GAVI was unable to offer support immediately. In the meantime, GAVI has been working with manufacturers on strategies to lower vaccine prices to make them more affordable to developing countries. As a result, in June 2011, Merck & Co announced that it would provide its HPV vaccine at US\$ 5 per dose to GAVI, a 67% reduction in the current lowest public price. GAVI continues to work with manufacturers to lower prices.

GAVI's Board decision

The Board's decision to open a funding window means that GAVI will invite countries to apply for funding for HPV vaccines provided an acceptable price from manufacturers has been secured. Funding proposals

will have to demonstrate the country's ability to deliver the vaccines successfully or deploy pilot projects. GAVI will collaborate with reproductive health and cancer control communities to ensure a cost-effective and integrated programme to decrease the global incidence of cervical cancer.

Partners

Many organisations are actively involved with clinical and operational research, policy analysis, and advocacy related to HPV vaccine. Collaborating partners and their main roles include:

- **The World Health Organization (WHO)**, technical information, standards and guidelines
- **International Agency for Research on Cancer (IARC)**, epidemiological studies assessing HPV type-specific prevalence among various populations
- **PATH**, operational research in India, Peru, Uganda, and Vietnam to inform decisions about how to introduce HPV vaccines
- **Alliance for Cervical Cancer Prevention**, field studies, especially in relation to screening approaches
- **The Cervical Cancer Action coalition**, advocacy and education
- **Vaccine manufacturers and academia**, clinical research
- **UNFPA**, reproductive health
- **GAVI Alliance**, financial support for the introduction of vaccines into the routine immunisation of eligible countries

Resources

- **Partnership for Maternal Newborn & Child health**
www.who.int/pmnch/topics/maternal/knowledge_summaries_15_noncommunicable_diseases/en/index.html
- **WHO – Cancer**
www.who.int/reproductivehealth/topics/cancers
- **PATH – Cervical Cancer**
www.rho.org
- **Alliance for Cervical Cancer Prevention**
www.alliance-cxca.org

Information current as of March 2012