HPV (human papillomavirus)

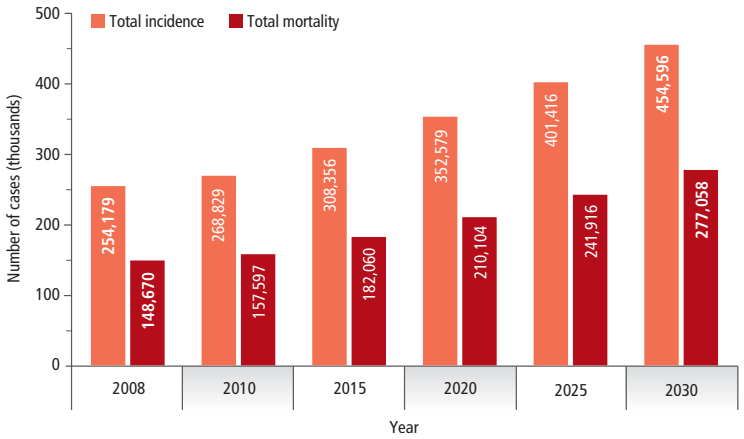
2013 is the beginning of a dramatic shift in women's health. A record low price for HPV vaccines opens the door for poor countries to vaccinate millions of girls against a devastating women's cancer.

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 administrated before a person is infected.

Over half the global burden of cervical cancer deaths exists in GAVI-supported countries.

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 and Principe

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 (WHO) 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]

[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.

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.

Following a successful pledging conference, in November 2011 the Board opened a funding window for HPV vaccines provided that an acceptable price was secured.

GAVI worked with manufacturers on strategies to lower vaccine prices to make them more affordable to developing countries. As a result, GAVI achieved a price of US $4.50, a two-thirds reduction on the current lowest public price for HPV quadrivalent vaccine. As HPV vaccines are rolled out through the developing world, further price reductions are expected.

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 and its partners are responding to the challenge by providing support for HPV demonstration projects.

Two pathways for application

Eligible countries with demonstrated experience in reaching adolescent girls with HPV or other multi-dose vaccines, can apply for GAVI-supported national introduction. Countries lacking experience can apply for support to conduct smaller-scale demonstration projects and thereby 'learn by doing' in order to gain the experience necessary to apply for national roll-out.

Over the coming months, the first eight countries – Ghana, Kenya, Madagascar, Malawi, Niger, Sierra Leone, United Republic of Tanzania and Lao PDR – will get GAVI support to test the best ways to deliver HPV vaccines to girls. These demonstration projects will pave the way for countries to build the capacity and infrastructure needed to vaccinate girls nationwide. In 2014, Rwanda will be the first country to introduce the vaccines nationally with GAVI support.

GAVI is collaborating with a wide range of stakeholders from adolescent reproductive health, cancer, education and other areas of benefit to girls, both in the design of the demonstration projects and to ensure a successful and integrated programme to decrease the global incidence of cervical cancer.

By 2015, GAVI plans to support the vaccination of one million girls in more than 20 countries. Those numbers are expected to accelerate dramatically with more than 30 million girls vaccinated in over 40 countries by 2020.

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 May 2013

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