

Cervical Cancer Prevention

Key Points and statistics:

- Cervical cancer is a leading cancer killer of women in developing countries, with 266,000 deaths annually (over 700 deaths per day).
- The disease takes many years to develop, and cure rates are high when cervical precancer is found and treated early.
- New techniques for screening and treating adult women are appropriate for low-resource settings.
- Vaccines against the human papillomavirus (HPV)—the virus that causes cervical cancer—are safe, and they are effective when given to girls before they begin their sexual lives.
- WHO advises that countries develop comprehensive programs that include both screening/treatment and vaccination.
- Many developing countries are introducing HPV vaccines and are beginning screening and treatment programs.
- Cervical cancer is almost entirely preventable, but more resources are needed to make universal prevention a reality and to bring mortality rates to the low levels found in the U.S., Europe, and Australia.

Quick Facts:

- 266,000 preventable deaths annually
- 95% effectiveness of HPV vaccines
- 85-95% cure rates for cervical precancer
- Low cure rates for advanced cervical cancer

Overview of the topic

Women worldwide are exposed to the human papillomavirus, or HPV, yet it is primarily women in the developing world, where there is little or no access to early screening and treatment, who are most likely to die from this disease.

Cervical cancer killed about 266,000 women worldwide in 2012, with nearly nine out of ten (87 percent) of these deaths in low- and middle-income countries.¹ Today, cervical cancer is the second most common cancer among women in the developing world, and is the primary cancer killer among women in most developing countries, where health systems often are weak and where women lack access to prevention and treatment services.

For decades, low-resource countries attempted to follow the lead of higher-income nations by using cytology (“Pap smear”) as a primary approach to preventing cervical cancer. These well-intended efforts proved inadequate when faced with the many geographic, human resource, and health system challenges of lower-income settings. As a result, despite decades of effort, little or no impact was made against the disease in most of the world.

Faced with a growing burden of cervical cancer, researchers worked to develop and validate novel approaches to prevent cervical cancer. Over the past few years, new global evidence, practice innovations, and powerful tools have emerged. For example, studies have shown that effective screening and early treatment for

cervical cancer is possible in all settings—using low-cost visual inspection with acetic acid (VIA) and/or HPV DNA testing—along with cryotherapy (freezing affected tissue) or cold coagulation as a frontline treatment.

HPV vaccines, which protect girls who have not yet been exposed to HPV, are effective in preventing at least 70% of cervical cancer cases.

In addition to introducing new technologies, progress must be made decreasing the barriers that stand between women and services, such as lack of information, access to transport, and financial and social barriers to preventive care.

New programs and innovations

Many countries have begun vaccinating girls aged 9-13 against HPV (this is sometimes called “primary prevention” because it protects individuals against infection). Results show that vaccination is well-accepted. Once the girls and their parents understand the link between HPV and cancer, they are eager to have the “cervical cancer vaccine.”

Screening women even once in their lives significantly reduces the likelihood of advanced cervical cancer. Normally VIA is done by a nurse or doctor during a pelvic examination—after washing the cervix with dilute acetic acid (vinegar) they examine it for signs of problems. Precancerous lesions should be treated as soon as possible after screening, and during the same clinic visit when feasible (this is called the single visit approach).

Some countries have begun using HPV DNA tests to collect samples from the vagina (not the cervix), avoiding the barriers commonly associated with getting pelvic exams. Vaginal sampling can be done by anyone, so this new strategy could dramatically increase screening coverage and allow clinicians to focus on treating women who test positive for HPV. In those cases, VIA is still useful to determine if cryotherapy is appropriate for the specific case, or if other, more complicated, treatment methods are necessary.

What needs to happen next

Prevention of cervical cancer is much more effective, and cost-effective, than treatment of advanced cancer. Fortunately, we know what to do to prevent cervical cancer even in remote, impoverished regions. We have the right tools for the job. What is most needed now is political will among policymakers to roll out prevention programs at scale and to mobilize resources from both development partners and country budgets.

It is crucial to educate policy makers, health care providers, and parents about prevention options. Health care workers and parents should talk with girls about cervical cancer prevention.

The price of HPV vaccine has fallen dramatically. Gavi, the Vaccine Alliance, secured a record-low price of US \$4.50 per dose for low-income countries. Gavi provides the vaccine free of cost for HPV demonstration projects and, for national HPV immunization programs, countries pay as little as 20 cents per dose (two doses are necessary).

Yet, buying the vaccine remains a challenge for lower- and middle-income countries that do not qualify for Gavi support.

Even when using VIA, screening and treatment programs are more complex to initiate than HPV vaccination because of the need for careful staff training, program quality control, and equipment for both screening and treatment.

Women coming to clinic-based cervical cancer screening programs should be offered an integrated package of services including screening for other chronic diseases and education about breast cancer.

References:

¹ International Agency for Research on Cancer (IARC). *GLOBOCAN 2012: Estimated Cancer Incidence, Mortality and Prevalence Worldwide in 2012*. Lyon, France: IARC; 2013. Available at: http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx. Accessed February 26, 2014.

Resources:

RHO Cervical Cancer Library

www.rho.org

Progress in preventing cervical cancer:
Updated evidence on vaccination and screening
(all prevention options)

www.rho.org/ccresources.htm#outlook

Cervical Cancer Prevention and Treatment
(focus on VIA for screening)

<http://www.jhpiego.org/content/cervical-cancer-prevention-and-treatment>

Cervical Cancer Prevention Action Planner

www.rho.org/ap

Cervical Cancer Action “Report Card” and maps

www.cervicalcanceraction.org/home/home.php

“Kill or Cure? The Real Lady Killer” film from BBC

www.rho.org/kill-or-cure-video_09.htm

Gavi, the Vaccine Alliance HPV vaccine applications
for country support

www.gavialliance.org/support/apply/

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The Task Force on Women and NCDs seeks to respond to the unique and growing burden of non-communicable diseases on women in low and middle income countries (LMICs) by mobilizing leadership, expanding technical expertise and disseminating evidence to inform policymaking, planning and services. The Task Force seeks to inform its partner organizations, local and national governments, and leaders within the health community about the important role of NCDs in women’s health. Together, we can improve health outcomes for women.

