

Current initiatives in cervical cancer prevention

Today, there is broad recognition of the growing and inequitable burden of cervical cancer in low-resource countries, and uptake of new screening and treatment alternatives for adult women and human papillomavirus (HPV) vaccines for young adolescent girls is on the rise. This means that for the first time in history, with sufficient political will and resources, the elimination of cervical cancer is within reach.

PATH has witnessed these dramatic changes firsthand. We began to focus on the problem of cervical cancer in 1991. Over the past 25 years, our portfolio has expanded tremendously to cover the full range of technologies and approaches for the prevention of cervical cancer. This fact sheet summarizes PATH's current work and future priorities.¹

SCREENING FOR CERVICAL CANCER AND PRECANCER

VIA. Cervical precancer is highly treatable, yet in most developing countries few women receive the screening needed to detect precancer before it advances to full-blown cervical cancer. Visual inspection with acetic acid (VIA) is a relatively low-cost procedure that—with the right training—is shown to be effective when offered by physicians, nurses, or paramedical staff.

While VIA is not as sensitive as new molecular technologies, it saves lives and is an important starting point for areas that require building their capacity for pelvic examination and precancer treatment—services that are required before implementing HPV-DNA testing. The goal of PATH's **Cervical Cancer Prevention project** is to increase access to screening by VIA and precancer treatment through the dissemination of up-to-date information, use of decision-modeling to answer critical questions about program design (in collaboration with Harvard University), and targeted technical assistance to countries to develop national strategies and design effective and efficient programs. PATH also is working with the Uganda Cancer Institute to create an African regional training center for screening and precancer treatment.



PATH works across the spectrum of cervical cancer prevention approaches, including introducing HPV-DNA testing in Central America. Photo: PATH/Xiomara Celeste Gonzalez.

HPV-DNA tests. A new possibility for increasing the accuracy and cost-effectiveness of screening programs is the use of molecular tests to detect HPV infection. For years, HPV-DNA testing was available only in well-resourced settings, but in recent years, PATH partnered with several organizations and private companies to make HPV testing available and affordable for areas with limited resources. Now, it is even possible to do HPV-DNA testing in very basic settings or in rural areas of low-resource countries.

PATH's **Scale-Up project** is working with several Central American countries to introduce large-scale HPV-DNA testing in their national programs and to update national policies and guidelines. Scale-Up is also working with the Pan American Health Organization (PAHO) to incorporate HPV tests in their Strategic Fund pooled procurement mechanism. Additionally, the project conducted a landscape analysis for the introduction of HPV-DNA testing in three East African countries.

Vaginal sampling without a pelvic exam is possible with a molecular HPV-DNA test. This exciting strategy could radically transform screening programs in low-resource settings and may finally be what is needed to bring universal, population-scale testing to reality.

¹ Our work over the years is documented in the first resource listed at the end of this paper.

TREATMENT OF CERVICAL PRECANCER

Even the best screening programs will have no impact unless women who need treatment receive it in a timely fashion. Fortunately, two low-cost and simple treatments are available: cryotherapy (to freeze affected tissue) and thermal coagulation. Access to refrigerant gas is the main limiting factor for expanding the introduction of conventional cryotherapy; for this reason, PATH is partnering with two private companies to develop non-gas treatment devices. We are evaluating the operational feasibility, ease of use, and cost of the CryoPen® Cryosurgical System compared to conventional cryotherapy and developing a protocol for the evaluation of clinical efficacy of thermal coagulation. In a separate effort, we are analyzing the dynamics of the precancer treatment equipment market.

HPV VACCINATION

PATH was among the first organizations to assess the acceptability and feasibility of vaccinating young adolescent girls against HPV in the developing world. Data generated in Africa, Asia, and Latin America—along with planning and evaluation tools—are freely available to guide program strategies and implementation planning (see resources).

Currently, in collaboration with Gavi, the Vaccine Alliance and the World Health Organization, PATH offers low- and middle-income countries (LMICs) technical assistance to help ensure that their HPV vaccination programs are successful. Interested governments should contact PATH.

ANALYSES OF THE COST OF PREVENTION

Costing studies comparing different screening tests and algorithms, or assessing various strategies to vaccinate young adolescents, are a critical part of PATH's work to help decision-makers. To this end, we published a paper estimating the costs of establishing comprehensive screening and precancer treatment in 23 high-burden African countries using VIA and cryotherapy.

PATH also collaborated with the Cervical Cancer Action coalition (CCA) and the American Cancer Society on a modeling study to estimate the total investment required to offer both vaccination and screening/treatment to all the girls and women in LMICs who need it.

INFORMATION AND ADVOCACY

PATH's RHO Cervical Cancer website (www.rho.org), a comprehensive online library, offers a host of documents and tools published by the world's leading HPV experts and organizations. Our Cervical Cancer Prevention Action Planner—built into RHO—is an interactive, online tool that helps decision-makers think through the pros and cons of various options, and links them with helpful resources. PATH also sends "HPVflash" email updates to share timely information around the globe. Users can subscribe to HPVflash at www.rho.org/subscribe.

Finally, as co-chair of CCA, PATH is raising awareness, mobilizing political will, and fostering positive policy change worldwide, in part through our maps showing global uptake of HPV vaccine, VIA, and HPV-DNA testing (cervicalcanceraction.org)

PRIORITIES FOR 2016–2020

1. Accelerate scale-up of screening using HPV-DNA testing and non-gas precancer treatment.
2. Provide technical assistance to support LMICs in the adoption and scaling up of HPV vaccine.
3. Develop improved screening and precancer treatment technologies, from design to commercialization.
4. Host a global learning network to support the exchange of lessons learned.
5. Provide advocacy leadership to build political support and increase international and national investment for cervical cancer prevention.

CERVICAL CANCER PREVENTION RESOURCES

(available from www.rho.org—search for each title)

- *Cervical Cancer Prevention at PATH: Two Decades of Progress Toward a World Free of HPV-Related Cancers*
- *Outlook*. Preventing Cervical Cancer: Unprecedented Opportunities for Improving Women's Health
- Cervical Cancer Prevention: Practical Experience Series
- BBC documentary on cervical cancer in Uganda ("Kill or Cure: The Real Lady Killer")
- *Recent Evidence on Cervical Cancer Screening in Low-Resource Settings*

FOR MORE INFORMATION

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www.path.org

PATH is the leader in global health innovation. An international nonprofit organization, we save lives and improve health, especially among women and children. We accelerate innovation across five platforms—vaccines, drugs, diagnostics, devices, and system and service innovations—that harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity. By mobilizing partners around the world, we take innovation to scale, working alongside countries primarily in Africa and Asia to tackle their greatest health needs. Together, we deliver measurable results that disrupt the cycle of poor health. Learn more at www.path.org.

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