

# Cervical Cancer Prevention

## FACT SHEET



### Cervical Cancer Prevention for all Women—the Time is Now

If not detected and treated early, cervical cancer kills. Approximately 270,000 women die from cervical cancer each year, with nearly 85 percent of those deaths occurring in the developing world.

Cervical cancer results from infection with the human papillomavirus, or HPV, which affects both women and men. Usually women contract HPV in their teens and twenties. For most women the infection passes without causing harm. But for some, the disease progresses to cancer in ten or twenty years.

Over the past 40 years, widespread, routine use of the Pap smear to test for early signs of disease has resulted in a dramatic decline in cervical cancer deaths in wealthier countries. But the situation is different in the developing world, where there is a shortage of efficient, high-quality pre-cancer screening programs. And even in well-resourced countries with quality screening programs, inequities exist among different population groups.

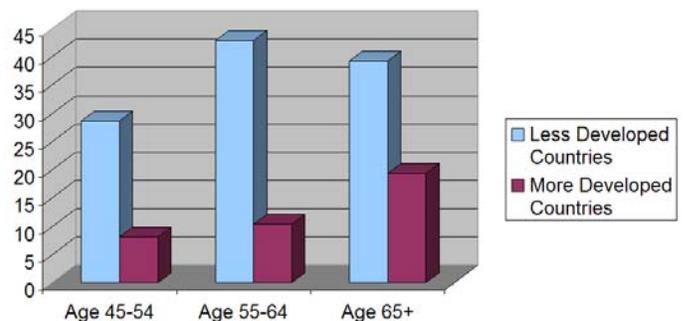
In 1999, five international health organizations came together to create the Alliance for Cervical Cancer Prevention (ACCP). They were determined to find effective methods health care workers in the developing world could use to identify cervical cancer early, when it can be successfully treated in relatively simple and inexpensive ways.

Over the past eight years, with generous support from the Bill & Melinda Gates Foundation, the ACCP partners have been assessing a variety of approaches to cervical cancer screening and treatment, improving service-delivery systems, ensuring that community perspectives and needs are incorporated into program design, and raising awareness about cervical cancer and effective prevention strategies. Based on the results of work in 20 African, Asian, and Latin American countries, the ACCP partners recently summarized and shared the following findings and recommendations:

#### ACCP 10 Key Findings and Recommendations for Effective Cervical Cancer Screening and Treatment

1. Every woman has the right to cervical screening at least once in her lifetime. In low-resource settings, the optimal age for screening to achieve the greatest public health impact is between 30 and 40 years old.<sup>1, 2</sup>
2. Although cytology-based screening programs using Pap smears have been shown to be effective in the United States and other developed countries, it is difficult to sustain high-quality cytology programs. Therefore, in situations where health care resources are scarce, resources should be directed towards cost-effective strategies that are more affordable and for which can be assured.<sup>3, 4, 11</sup>
3. Studies have shown that the most efficient and effective strategy for secondary prevention of cervical cancer in low-resource settings is to screen using either HPV-DNA testing or VIA (visual inspection of the cervix after swabbing it with vinegar), then treat precancerous lesions using cryotherapy (freezing). This is optimally achieved

Age-Specific Cervical Cancer Mortality Rates  
per 100,000 Women



Source: Globocan 2002

Many more women die of cervical cancer in the developing world than in wealthier countries. In the industrialized world, effective screening programs help to identify precancerous lesions at a stage when they can easily be treated. But lack of screening programs in poorer countries means that the disease is not identified until it is too late, resulting in higher mortality.

in a single visit (currently possible with VIA plus cryotherapy) and can be carried out by competent physicians and non-physicians, including nurses and midwives.<sup>\*\*\* 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14</sup>

NOTE: VIA is a low-cost procedure that can be done in any clinic. VIA has been shown to be about as effective as Pap testing in identifying cervical cancer precursors, but Pap requires much more sophisticated equipment, training, and logistics systems. HPV-DNA testing—a high-tech solution—is more effective than either VIA or Pap, but current tests are expensive and require a laboratory. Fortunately, easier-to-use and less expensive HPV-DNA tests soon will become available, and may revolutionize cervical cancer screening around the globe.

4. The use of HPV-DNA testing followed by cryotherapy results in greater reduction of cervical cancer precursors than the use of other screening and treatment approaches.<sup>7, 13, 15</sup>
5. Cryotherapy, when conducted by competent providers, is safe and results in cure rates of 85 percent or greater.<sup>12, 16, 17, 18, 19</sup>

NOTE: Cryotherapy requires some special equipment, but it is simpler than other methods for treating pre-cancerous lesions and is appropriate in many cases.

6. Studies suggest that cryotherapy is protective against the future development of cervical disease among women with current HPV infection. Because of this, and due to the low morbidity of cryotherapy, the occasional treatment of screen-positive women without confirmed cervical disease is acceptable.<sup>12</sup>
7. Unless there is a suspicion of invasive cervical cancer, the routine use of an intermediate diagnostic step (such as colposcopy) between screening and treatment is generally not efficient and may result in reduced programmatic success and increased cost.<sup>1, 20, 21</sup>
8. Women, their partners, communities, and civic organizations must be engaged in planning and implementing services, in partnership with the health sector.<sup>22, 23, 24</sup>
9. For maximum impact, programs require effective training, supervision, and continuous quality improvement mechanisms.<sup>19, 22</sup>
10. Additional work is needed to develop rapid, user-friendly, low-cost HPV tests and to improve cryotherapy equipment.

## Next steps

The data are clear—it is possible to do something about cervical cancer in the developing world. We know how to train health workers to perform appropriate and effective procedures like VIA and to treat women using cryotherapy. And one day soon, when low-cost HPV DNA tests become commonplace, the same trained staff can use the new tests as well. We know that a screen-and-treat approach can be easily incorporated into primary-care services and that it brings the services closer to where women reside, reduces the number of clinic visits required, and reduces barriers to screening and follow-up care. These lifesaving interventions are available and proven. But funding, and political will, are needed to move beyond research trials and demonstration projects and to develop national cervical-cancer screening programs at scale. Failure to do so would represent a tragic lost opportunity. Now it is time for action.

Another new technology, the much-heralded HPV vaccine, also has an important role to play in a comprehensive cervical cancer control program. While screening is needed for women who already have been infected with HPV, vaccine can protect young adolescent girls against infection in the first place. This two-pronged strategy—screening plus vaccination—has the potential to save millions of lives over the next decades.

The ACCP partners call for increased support for cervical cancer screening programs in Africa, Asia, and Latin America. We call for expanded access to inexpensive, effective cryotherapy equipment, and research into effective strategies for expanding access to screening and treatment where HIV prevalence is high. Finally, we call on United States Agency for International Development, the World Health Organization, The United Nations Children's Fund and the GAVI Alliance to work with industry to make the new HPV DNA screening tests and HPV vaccines affordable to the low-resource countries where women need them most.

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\*\*\* It is important to note that subsequent to screening using an HPV DNA test, triage using VIA is still necessary to identify those patients for whom cryotherapy is not appropriate.

## References

1. Goldie SJ, Gaffikin L, Goldhaber-Fiebert JD, et al. Cost-effectiveness of cervical-cancer screening in five developing countries. *New England Journal of Medicine*. 2005;353(20):2158–2168.
2. Sankaranarayanan R, Esmy P, Rajkumar R, et al. Effect of visual screening on cervical cancer incidence and mortality in Tamil Nadu, India: a cluster-randomised trial. *The Lancet*. 2007;370(9585):398–406.
3. International Agency for Research on Cancer (IARC). *Cervix Cancer Screening*. Lyon: IARC Press; 2004. IARC Handbooks on Cancer Prevention, Volume 10.
4. Almonte M, Ferreccio C, Winkler JL, et al. Cervical screening by visual inspection, HPV testing, liquid-based, and conventional cytology in Amazonian Peru. *International Journal of Cancer*. 2007;121:796–802.
5. Belinson J, Qiao, YL, Pretorius R, et al. Shanxi Province Cervical Cancer Screening Study: a cross-sectional comparative trial of multiple techniques to detect cervical neoplasia. *Gynecologic Oncology*. 2001;83(2):439–444.
6. Sankaranarayanan R, Basu P, Wesley RS, et al. Accuracy of visual screening for cervical neoplasia: Results from an IARC multicentre study in India and Africa. *International Journal of Cancer*. 2004;110(6):907–13.
7. Sankaranarayanan R, Nene BM, Dinshaw KA, et al. A cluster randomized controlled trial of visual, cytology and human papillomavirus screening for cancer of the cervix in rural India. *International Journal of Cancer*. 2005;116(4):617–623.
8. University of Zimbabwe/JHPIEGO Cervical Cancer Project. Visual inspection with acetic acid for cervical cancer screening: Test qualities in a primary-care setting. *The Lancet*. 1999;353:869–873.
9. Megevand E, Denny L, Dehaeck K, Soeters R, Bloch B. Acetic acid visualization of the cervix: an alternative to cytologic screening. *Obstetrics and Gynecology*. 1996;88:383–386.
10. Sankaranarayanan R, Gaffikin L, Jacob M, Sellors J, Robles S. A critical assessment of screening methods for cervical neoplasia. *International Journal of Gynaecology and Obstetrics*. 2005;89(Suppl 2):S4d–S12.
11. Sarian LO, Derchain SF, Naud P, et al. Evaluation of visual inspection with acetic acid (VIA), Lugol's iodine (VILI), cervical cytology and HPV testing as cervical screening tools in Latin America. This report refers to partial results from the Latin American Screening (LAMS) study. *Journal of Medical Screening*. 2005;12:142–149.
12. Sankaranarayanan R, Rajkumar R, Esmy PO, et al. Effectiveness, safety and acceptability of 'see and treat' with cryotherapy by nurses in a cervical screening study in India. *British Journal of Cancer*. 2007;96(5):738–43.
13. Denny L, Kuhn L, De Souza M, Pollack AE, Dupree W, Wright TC Jr. Screen-and-treat approaches for cervical cancer prevention in low-resource settings: a randomized controlled trial. *Journal of the American Medical Association*. 2005;294(17):2173–2181.
14. World Health Organization (WHO). *Comprehensive cervical cancer control—a guide to essential practice*. Geneva: WHO; 2006.
15. Gravitt P, Coutlee F, Iftner T, Sellors J, Wheeler C. New Technologies in Cervical Cancer Screening. Chapter 3. *Vaccine*. In Press.
16. Castro W, Gage J, Gaffikin L, et al. *Effectiveness, Safety and Acceptability of Cryotherapy: A Systematic Literature Review*. Seattle: PATH; 2003. Cervical Cancer Prevention Issues in Depth, No.1.
17. Luciani S, Gonzales M, Munoz S, Jeronimo J, Robles S. Effectiveness of cryotherapy treatment for cervical intraepithelial neoplasia. *International Journal of Gynecology & Obstetrics*. 2008;January 18. Epublished ahead of print.
18. Royal Thai College of Obstetricians and Gynecologists/JHPIEGO Corporation, Cervical Cancer Prevention Group. Safety, acceptability, and feasibility of a single-visit approach to cervical cancer prevention in rural Thailand: a demonstration project. *The Lancet*. 2003;361(9360):814–820.
19. Blumenthal PD, Lauterbach M, Sellors JW, Sankaranarayanan R. Training for cervical cancer prevention programs in low-resource settings: focus on visual inspection with acetic acid and cryotherapy. *International Journal of Gynecology & Obstetrics*. 2005;98: S30–S37.
20. Luciani S, Winkler J. *Cervical Cancer Prevention in Peru: Lessons Learned from the TATI Demonstration Project*. Washington, DC: PAHO; 2006.
21. Gage JC, Ferreccio C, Gonzales M, Arroyo R, Huivin M, Robles S. Follow-up care of women with an abnormal cytology in a low-resource setting. *Cancer Detection and Prevention*. 2003;27(6):466–71.
22. Agurto I, Arrossi S, White S, et al. Involving the community in cervical cancer prevention programs. *International Journal of Gynecology & Obstetrics*. 2005;89, S38–S45.
23. Sherris J, Friedman A, Wittet S, Davies P, Steven M, Saraiya M. Education, training, and communication for HPV vaccines. *Vaccine*. 2006;24(Suppl 3): 210–218.
24. Sherris J, Agurto I, Arrossi S, et al. Advocating for cervical cancer prevention. *International Journal of Gynecology & Obstetrics*. 2005;89(Suppl 2):S46–S54.

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