

Screening still the “best buy” for tackling cervical cancer

In spite of a vaccine that holds some promise for cervical cancer prevention, screening is still essential. Débora Miranda reports on the options for developing countries.

When teenager Aisha received a vaccination against the human papillomavirus (HPV) at her school in Uganda, she knew more about cervical cancer than her classmates. Her mother had died of the disease, the second most common cancer in women in developing countries. Aisha's mother was one of half a million women worldwide who are estimated to develop cervical cancer each year, more than half of them die as a result.

Virtually all (99%) cervical cancer cases are linked to infection with HPV. The majority of sexually active people will acquire HPV infection at some time in their life. Infection usually clears without treatment within a few months and does not cause any lasting problems. However, persistent infection of high-risk HPV types beyond 12 months is linked to an increased risk of cancer.

In 2006, the first vaccine to prevent the most common cancer-causing HPV infections became available. Since then, more than 120 countries have licensed the jab and 33 of them have introduced national vaccination programmes primarily targeted at adolescent girls like Aisha.

However, even in these mainly high-income countries, a vaccination programme will not eliminate the need for screening because the current vaccines only protect against HPV types that are responsible for about 70% of cervical cancer cases. Because most people are infected with HPV early in their sexual lives, to achieve greatest impact young people need to be vaccinated before they are sexually active.

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Claudio Politi

So this poses the question: should governments invest more in vaccination or screening?

Claudio Politi, health economist at WHO, says: “The difficult choice in a context of scarce resources is to identify the right balance. Investment strategies

depend on the price of the vaccine, duration of vaccine protection, efficacy, the cost of screening and country resources such as trained professionals and treatment options.”

Pap smears have been the standard screening procedure in the developed world for almost 50 years but they require quality laboratory services and an efficient infrastructure that allows rapid transport of smears. “There are not enough cytologists in developing countries,” says Nathalie Broutet, medical officer at WHO.

Many African countries have opted for visual inspection with acetic acid (VIA), an inexpensive, low-tech test in which a health-care worker applies dilute acetic acid (vinegar) to the cervix and looks for abnormal tissue that temporarily turns white in contact with the vinegar.

Between 2005 and 2009, WHO and the International Agency for Research on Cancer were involved in implementing cervical cancer prevention and control programmes based on VIA followed by the use of cryotherapy for treatment where available, in six African countries: Malawi, Madagascar, Nigeria, Uganda, the United Republic of Tanzania and Zambia. More than 20 000 women have been screened so far and VIA is now included as part of cervical cancer screening in 17 national or regional programmes.

Nathalie Broutet, who coordinated the project, explains: “We should start to implement cervical cancer prevention and control programme with what is available, is not expensive and saves lives, such as VIA. Once you have the structure of a programme with all components in place, you can then improve the programme and consider changing the screening method with new ones that perform better and that will be, hopefully, soon on the market.”

The advantage of VIA is that women can be screened and treated at the same time. If abnormalities (precancerous lesions) are found on a woman's cervix, they



Ugandan girl, Aisha, talks about her mother's death from cervical cancer



Developing countries are weighing up their options for best ways to prevent cervical cancer

can be treated on the same day by freezing and destroying them with cryotherapy. Broutet says: "It's very important to follow up with women who are screened positive. The single-visit approach decreases the risk of women forgetting or not being able to come back, as many live far away from health facilities. However, not all health facilities have cryotherapy equipment. In that case, active follow-up of these women will have to be done to ensure that they benefit from treatment."

Cervical cancer is one of the topics on the agenda for this month's United Nations high-level meeting on noncommunicable diseases in New York. A discussion paper for policy-makers attending the meeting recommends cervical cancer screening using VIA and treatment of precancerous lesions as a "best buy", because it is considered to be a highly cost-effective use of health dollars, costing less than US\$ 0.50 per capita to implement in primary-care settings in low- and middle-income countries. Interventions

are considered "highly cost-effective" if they generate an extra year of healthy life for a cost less than the average annual income per person.

The approach to cervical cancer screening, however, may be set to change with the development of a more accurate screening method that uses a laboratory test to find HPV DNA in cervical cells, which could be used in addition to looking for abnormal lesions. As of 2006, WHO recommended the use of HPV DNA tests only in pilot projects. In light of new data supporting HPV testing, these recommendations are currently being updated. Broutet's team is studying the implementation of HPV testing in Africa, using a test designed specifically for lower-income countries.

According to the United States Preventive Task Force, however, there is not enough evidence to recommend the use of HPV DNA testing as a primary screening test for cervical cancer, particularly for younger women in whom HPV is highly

prevalent and cervical cancer prevalence relatively low. It suggests that it may have some benefit for women aged 30 years or older to help identify those women who should be sent for colposcopy and/or screened at more regular intervals.

Both high- and low-income countries are currently weighing their options for best ways to tackle cervical cancer with limited dollars. Many developing countries have been able to begin to learn lessons to scale-up pilot programmes and eventually to reduce the number of cases and deaths from cervical cancer. Because these pilot programmes are commonly based on donated vaccines and screening tests, the challenge will be funding for long-term sustainability.

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Politi agrees that sustainability is crucial and adds that, while accepting donations under strict conditions to implement programmes for a few years, countries should gradually become capable of developing and sustaining their own national programmes.

Hopefully, with a combination of a vaccine, good screening and education, young women like Aisha will stand a better chance of avoiding cervical cancer. Watch the short film that is part of the BBC's "Kill or Cure" series which features Aisha http://www.rho.org/kill-or-cure-video_09-short.htm ■