



Recommendations for Cervical Cancer Prevention in Sub-Saharan Africa

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Introduction

This chapter summarizes the key findings of the sub-Saharan Africa (SSA) Regional Report of the Human Papillomavirus (HPV) and Disease Prevention Monograph series and provides recommendations for the control of cervical cancer and other HPV-related diseases in this part of the world. In this Regional Report, we describe the burden of disease caused by HPV (see De Vuyst H *et al.* Vaccine, this issue [1]), the current implementation of cervical cancer screening and vaccination against HPV (see Sankaranarayanan R *et al.*, and Adefuye PO *et al.* Vaccine, this issue [2,3]) and assess the cost-effectiveness of cervical cancer prevention strategies for the countries in the SSA region (see Kim JJ *et al.* Vaccine, this issue [4]).

Africa has a population of more than 250 million women aged 15 years and older who are at risk of developing cervical cancer. In 2008, there were 75,000 women diagnosed with cervical cancer in SSA and over 50,000 women died from the disease. Cervical cancer incidence rates in SSA are the highest in the world and the disease is the most common cause of cancer death among women in the region. The high incidence of cervical cancer is a consequence of the inability of most countries to either initiate or sustain cervical cancer prevention services. It is expected that due to several factors such as lack of access to appropriate prevention services and the human immunodeficiency virus infection/acquired immunodeficiency syndrome (HIV/AIDS) epidemic, cervical cancer incidence and mortality rates in SSA will rise over the next 20 years.

In the following sections we summarize what we believe are key points to reinforce primary and secondary cervical cancer preventive strategies in SSA.

Primary prevention

- Following the World Health Organization (WHO) position paper, HPV prophylactic vaccination of pubescent/adolescent girls is recommended as a cost-effective intervention provided that conditions for delivery, program implementation and cost are met.
- It is recommended that primary prevention of cervical cancer be promoted in the context of Millennium Development Goal 5b (i.e., Universal Access to Reproductive Health).
- Using a model-based approach, results derived from 46 countries in the region showed that vaccination of pre-adolescent girls could be very cost-effective in almost all countries evaluated if the cost per vaccinated girl is less than IS\$25–IS\$50.
- It is recommended that in setting up prophylactic HPV vaccination programs, linkage with other health care interventions be considered (e.g., vitamin A supplementation, de-worming, nutritional assessment, booster doses of other vaccines, among others).

Secondary prevention

Secondary prevention of cervical cancer based on cytology is too expensive and the requirements too challenging to be sustained in SSA. Alternative approaches have been investigated which include visual inspection with acetic acid (VIA) and HPV testing.

- Functioning and adequately resourced health care infrastructure is required to support screening programs.
- Screening programs must be adapted to local realities and feasibility and must be linked to treatment options.
- Linkage to other health interventions (e.g., contraception, HIV testing, among others) should be considered in designing screening programs.

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- HPV testing is considered an objective, sensitive and reproducible cervical screening test, but currently available tests are expensive, laboratory based and not always accessible to countries in SSA.
- Clinically validated and affordable rapid HPV tests or point-of-care HPV tests are awaited for mass use in screening programs.
- VIA allows for an immediate result to be given to the patient but is operator dependent, lacks reliable means of quality assurance control, has a low positive predictive value and results in overtreatment of large numbers of women.
- VIA does, however, allow for the creation of an infrastructure for health care delivery to older women in very low resource settings, and once a more reliable test is either developed or becomes affordable, it is likely to be relatively easy to introduce into practice.
- Detection of cervical cancers in newly initiated screening programs is expected to be high and mechanisms for treatment/palliation of these women need to be prioritized in parallel with establishing the screening program.
- The impact of HIV/AIDS on HPV-related diseases needs to be taken into account in the design of prevention interventions and the management of cervical cancer and its precursors. More research is needed on efficacious screening and treatment algorithms in these women.

Surveillance and monitoring

- It is recommended that countries initiating screening or vaccination programs create population-based cancer registries in parallel:
 - In addition to HPV-related cancers, documentation of prevalence of genital warts and attention to prevention, diagnosis and treatment of genital warts need to be initiated.
- It is recommended that mechanisms be developed for monitoring of:
 - Coverage of each intervention.
 - Adverse side-effects of prophylactic vaccination against HPV.
 - Proportion of women with abnormal tests treated for precursor lesions.
 - Impact of the screening or vaccination program on cervical cancer incidence and mortality (through registries).
 - Quality control assessment of different steps within each intervention.
 - Resource requirements (e.g., personnel, monetary) for each intervention.

Advocacy

The African Union Commission needs to be approached to ensure that cervical cancer prevention and treatment is incorporated into African Union 2007–2015 Health Strategy, which aims to strengthen health systems in order to reduce disease burden through improved resources, systems, policies and management (<http://www.africa-union.org/root>).

Others

- It is recommended that countries devise mechanisms to stop the 'brain drain' of health care professionals from SSA to other

continents to increase the capacity of SSA countries to provide health care to its people.

- Health education of communities, health care workers and policy makers with respect to HPV-related disease needs to be devised and implemented.

This article forms part of a regional report entitled "Comprehensive Control of HPV Infections and Related Diseases in the Sub-Saharan Africa Region" Vaccine Volume 31, Supplement 5, 2013. Updates of the progress in the field are presented in a separate monograph entitled "Comprehensive Control of HPV Infections and Related Diseases" Vaccine Volume 30, Supplement 5, 2012.

Acknowledgements

The work was partially supported by public grants from the Instituto de Salud Carlos III (Spanish Government) (grants RCESP C03/09, RTICESP C03/10, RTIC RD06/0020/0095, RD12/0036/0056 and CIBERESP) and from the Agència de Gestió d'Ajuts Universitaris i de Recerca – Generalitat de Catalunya (Catalonian Government) (grants AGAUR 2005SGR00695 and AGAUR 2009SGR126).

Disclosed potential conflicts of interest

LD: Has received honoraria for appearing on various speaker fora from GlaxoSmithKline (GSK) and Merck/and Co. and sponsorship for research studies.

LA: Institutional support: HPV vaccine trials and epidemiological studies sponsored by GlaxoSmithKline, Merck and Sanofi Pasteur MSD. Personal support: Travel grants to conferences occasionally granted by Merck and Sanofi Pasteur MSD.

IFA: Is serving on an IDMC for HPV studies, has received honoraria for appearing on various speaker engagements for GSK and has participated in research sponsored by GSK.

SdS: Institutional support: HPV vaccine trials and epidemiological studies sponsored by GlaxoSmithKline, Merck and Sanofi Pasteur MSD. Personal support: Travel grants to conferences / symposia / meetings are occasionally granted by either GlaxoSmithKline, Sanofi Pasteur MSD or Qiagen.

FXB: Institutional support: HPV vaccine trials and epidemiological studies sponsored by GlaxoSmithKline, Merck and Sanofi Pasteur MSD. Personal support: Travel grants to conferences / symposia / meetings and honorarium are occasionally granted by either GlaxoSmithKline, Merck, Sanofi Pasteur MSD, Roche or Qiagen.

RS, HDV, JJK, POA, OAA, GP: Have disclosed no potential conflicts of interest.

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