



## Reasons for Low Uptake of Cervical Cancer Preventive Services in Kenya and other Low- Middle Income Countries: A Review Article

Authors

**James Mburu Kangethe<sup>1</sup>, Onesmus Wairubi Gachuno<sup>2</sup>, James Gitau Komu<sup>3</sup>, Kenneth Kipyegon Mutai<sup>4</sup>, Raphael Mwamtsi Lwembe<sup>5</sup>**

<sup>1</sup>Comprehensive Care Centre, Kenyatta National Hospital, Nairobi, Kenya, P.O BOX 20723-00202, Nairobi

<sup>2</sup>School of Medicine, College of Health Sciences, University of Nairobi, Kenya, P. O BOX 30197, GPO, Nairobi, Kenya

Email: [owgachuno@yahoo.com](mailto:owgachuno@yahoo.com)

<sup>3</sup>Department of Medical Laboratory Sciences, College of Health Sciences, Jomo Kenyatta University of Agriculture and Technology, Kenya, P. O BOX 62000-00200, City square, Nairobi, Kenya

Email: [jamsgitau@yahoo.com](mailto:jamsgitau@yahoo.com)

<sup>4</sup>Comprehensive Care Centre, Kenyatta National Hospital, Nairobi, Kenya, P.O BOX 20723-00202, Nairobi

Email: [mutaikk@gmail.com](mailto:mutaikk@gmail.com)

<sup>5</sup>Center for Virus Research, Kenya Medical Research Institute, P.O. BOX 54840- 00200 Nairobi Kenya

Email: [rlwembe@yahoo.com](mailto:rlwembe@yahoo.com)/ [jrnmwamtsi@gmail.com](mailto:jrnmwamtsi@gmail.com)/ [rlwembe@kemri.org](mailto:rlwembe@kemri.org)

Corresponding Author

**James Mburu Kangethe**

Comprehensive Care Center, Kenyatta National Hospital, P.O.BOX 20723- 00202, Nairobi Kenya

Tel: +254726237390. Email: [jimkangethe@gmail.com](mailto:jimkangethe@gmail.com)

### Abstract

*Invasive cervical cancer (ICC) has been documented to be the major cause of cancer-related deaths among women majorly in low and middle income countries such as Kenya. Despite cervical cancer increasingly being a huge national public health problem, uptake of cervical cancer preventive services in health facilities is still as low as 5%. The aim of this review was to identify all documented reasons for the very low utilization of cervical cancer preventive services in Kenya and other low- middle income countries and the proposed interventional strategies to increase the uptake. Using the key words cervical cancer screening, cervical cancer prevention, barriers, low- middle income countries and Kenya, an online search was done for published articles, reviews reports on uptake of cervical cancer preventive services. In total, 48 articles published between 2000 and 2018 were analyzed.*

*Three broad reasons identified as main factors hindering women at risk from utilizing cervical cancer preventive services in low- middle income countries include personal or individual, health systems and societal perspectives.*

*In order to significantly improve the uptake of cervical cancer preventive services in Kenya and other low- middle income countries, there is an urgent need to prioritize and integrate strategies to identify most suitable interventions. This review proposes on the interventions that will focus on health policies, sensitization of the African health care providers and awareness creation targeting women at risk of cervical cancer.*

## Introduction

Cervical cancer is the second most common cancer among women globally with approximately 528,000 new cases and 266, 000 deaths annually (IARC, 2012). HIV infected women develop cervical cancer quicker than the uninfected counterparts (Hawes, 2003). WHO guidelines suggest that cervical cancer prevention can be at primary, secondary and tertiary levels (WHO, 2013). Primary prevention strategies include provision of human papilloma virus vaccine to girls aged 9 to 13 years and creating appropriate health awareness on the risk behaviors and cervical cancer (Banura, 2012). Secondary prevention involves screening for early detection of asymptomatic and subclinical disease as well as treating and regularly assessing women at risk of developing malignancy (Mariani, 2008). This has been practiced by use of cytological smears and non-cytological screening methods such as visual inspection with acetic acid (VIA) and visual inspection with lugols iodine (VILI) (Sankaranarayanan, 2001). Tertiary prevention involves surgery, radiotherapy and or chemotherapy (WHO, 2013). The success of a cervical cancer prevention program is an immense challenge due to the fact that it is essential to attain high HPV vaccination rates, have herd immunity, and increase the cervical cancer screening coverage rates and cervical cancer treatment for all women with precursor lesions in target groups (Gakidou, 2008).

By the end of 2016, only 12 low income countries/ low middle income countries had introduced routine HPV vaccination in their national vaccination programs (LaMontagne, 2017). VIA VILLI was provided in 12 Sub Saharan African countries, whereas 15 countries offered pap smear cytology at population level in the same region (Coleman et al., 2016). This review aims to identify existing gaps in the utilization and uptake of cervical cancer prevention services for a possible effective intervention in Kenya and other low- middle income countries.

## Methods

Using the key words cervical cancer screening, cervical cancer prevention, barriers, Kenya, low and middle income countries, we searched several online databases including PubMed/ MEDLINE (NCBI), Google scholar, Embase (Elsevier) and African Index Medicus (AIM) for published studies. Our search also included highly relevant global and government reports not published in peer- reviewed journals. Inclusion criteria included publication between 2000 and 2018 conducted in Kenya and other low- middle income countries. Duplicates and articles that were not available in full were eliminated. Emphasis was made on articles focusing on African countries. Reference sections of articles were reviewed to identify additional eligible articles. A total of 48 articles were selected and analyzed.

## Results

Women at risk of developing cervical cancer in low and middle income countries fail to utilize cervical cancer care prevention services due to factors relating to individual, health systems and the society.

### Individual factors

Women and young girls lack awareness about cervical cancer screening, HPV vaccination and available treatments or interventions (ACCP, 2004). In a study conducted at a regional hospital in Tanzania to assess nurses awareness of cervical cancer and their own screening practices revealed that over 60% of the nurses did not know about the causative agents of cervical cancer and how it can be prevented (Urasa, 2011). Lukorito et al (2017) in their study conducted in Kenya among HIV newly diagnosed women enrolling in compressive care centers in Nairobi reported that 80% of the women were not aware of their HIV status and thus expressed no need for cervical cancer screening (Kahesa, 2012).

Early first sexual intercourse, early pregnancy, low condom use and high numbers of uncircumcised men with a history of multiple sexual partners in Africa were identified to be risk

factors associated with increased incidences of HPV infections (Loiue, 2009). In Micronesia women did not want to participate in cervical cancer screening because culturally, they did not want to show their genitals to anyone else apart from their husbands. (Wong and Kawamoto, 2010). Educated women with high income accessed the services more than those without education and with a low income (McFarland, 2003). Women have also reported failure to go for the prevention services because of diffidence (shyness) (Chidyaonga- Maseko, 2015). Social stigma has also been associated with cervical cancer probably because of its location, dire natural course and its connections to the socially condemned behaviors which are associated with HIV and AIDs (White, 2012).

Fear of getting diagnosed with cervical cancer has also scared women due to its association with death. Women with solid religious backgrounds believe in divine fate called fatalism and God's will destines specific persons to have certain conditions such as cancer of the cervix. (Arlene, 2005). Women would consider themselves not being at risk given that they did not have symptoms for cervical cancer and had fear of pain, bleeding and discomfort during and after cervical cancer screening procedure (Twiomujuni, 2015).

In HPV demonstration project carried out in Uganda, majority of the parents and guardians of the young girls who got partial vaccination or who did not get vaccinated cited lack of awareness about the vaccination program as the key reason for not getting this prevention service (Banura, 2012). In contrast to the HPV demonstration project in Kitui Kenya among young school girls, the vaccine coverage was high at 85%. The high coverage was achieved due to community sensitization, engagement and male involvement, the importance of accurate targeting to avoid vaccine shortfalls, and exploring ways of bundling HPV vaccine with other adolescent health services (KNCI, 2015).

### **Society associated barriers.**

Importance of sexual health education; most parents define sexuality as a taboo or they are in a mission to protect family reputation and encourage modesty. In Southern Europe, women lacked informal sexual education (Markovic, 2005), there was stigma attached to reproductive health discussions in communities (Markovic, 2005). Lower perception towards being at risk of cervical cancer has also been due to traditional myths and misconceptions (Bukirwa, 2015). Most Kenyan communities do not talk about cancers related to reproductive health (Thomas, 2005).

Gender inequality in the society influences women's poor ability to access cervical prevention services (Markovic, 2005).

### **Health system barriers**

Adequate financial resources, infrastructure, trained human resources and elaborate surveillance systems needs to be in place for a successful implementation of a cervical cancer prevention program (Sankaranarayanan, 2001).

Access to health facility and health personnel are barriers towards the uptake of cervical cancer prevention services both in the urban and sub urban areas (Markovic, 2005). There lacks the capacity to sustain both visual and cytological based cervical based screening programs in the low and middle income countries. Health care providers are not adequate to meet the demand of patients seeking care coupled by lack of a multidisplinary team of clinicians such as oncologists, gynecologists, radiologists and pathologist (Kessler, 2016).

Cytology as a screening tool, requires multiple visits to health facilities, with its inherent challenge of transport and time. In addition to late post-diagnosis treatment, there is inefficient recall and referral systems, inadequate resources for screening and treatment, and competing priorities in the healthcare system (Sahasrabuddhe, 2012). Longer waiting times either due to the absence or shortage of service providers at the health facility for the cancer screening services was reported to contribute to the poor uptake (Markovic, 2005).

There is few data on vaccine availability, health system preparedness, vaccine cost effectiveness, and long term impact (Louie, 2009). Few population based cancer registries exists and the existing cancer registries have poor quality data which cannot yield adequate report upon analysis (Louie, 2009).

On the other hand cervical cancer has been conceptualized as non-communicable disease, thus attracting less priority in terms of funding and research (Huchko, 2015). Lack of established palliative care services and inadequate pain control are rarely available (Mwaka, 2013).

There is lack of basic epidemiological data of HPV prevalence and genotype-distribution among women in the general population according to HIV sero status to evaluate the potential impact of HPV vaccines and cervical cancer screening strategies (Louie, 2009).

### **Discussion and recommendations**

Health systems in low and middle income countries need to strategize on how to develop health policies that are needed in facilitation and implementation of effective cervical cancer prevention programs. Locally designed programs would be useful in reducing barriers to screening such as poor quality health resources, economic and social inaccessibility, lack of awareness, difficulties in purchasing the services as well overcoming the stigma associated with cervical cancer (ACCP, 2004). Any intervention to increase uptake of cervical screening must be tailored to the baseline knowledge, perceptions, culture, and attitudes unique to the target population (Morema, 2014).

There is need for urgent sensitization of the African health care providers on cervical cancer in order to increase utilization and provision on cervical cancer prevention services. A study conducted in the US pacific Island among the health care providers reported that 90.3% of the health care providers prioritized cervical cancer prevention in their routine clinical practice (Townsend, 2014). Eight six percent (86%) of the

health care providers reported having adequate skills on the use of papanicolaou test to screen for cervical cancer. They proposed exploration and development of an evidence based, lower cost and sustainable screening technologies (Townsend, 2014). The WHO report on the comprehensive report on cervical cancer control (2014) proposed working with program managers and advisory group members in order to increase awareness among decision makers about the need for prioritization of women's sexual and reproductive health..

To maximize the impact on the health system, optimally deploy scarce resources and reach the women most at risk, the way forward will likely involve integration of cervical cancer prevention with existing health programs such as HIV/AIDS, adolescents and youth's clinics, reproductive health, maternal and newborn health, cancer and immunizations. There's need to reorganize screening programs in reference to developed countries and past failures. Early detection tests such as VIA should be considered in the context of early clinical diagnosis in regions lacking cytology laboratories (Sankarayanan, 2001). Gichangi et al (2003) in a study conducted in a national teaching hospital in Kenya proposed advocacy that will see the ministry of health include the cervical prevention services into the National Health Annual Budget, based on the information about program costs and available resources. The study also proposed provision of cost effectiveness information to policy makers and those with influence to policy. There is an urgent need to ensure cervical cancer prevention services are covered in the national insurance funds sponsored by the government. Establishment of a functioning referral system and retention at the referral facilities in managing of cervical cancer cases in Kenya and low- middle income countries will avert a number of disability adjusted life year (DALYs).

Medical students and nurses training curricula needs review and incorporate practical skills on cervical cancer screening in order to increase

hands on skills, attitudes and priorities on cervical cancer screening in health care provision (Mutyaaba, 2006). To the community massive awareness on the use of condoms, risks of early sexual activities and the importance of male circumcision while limiting the number of sexual partners will be useful in intervening the high prevalence of HPV infections and increase cervical cancer prevention uptake (Louie, 2009). Media awareness as well as use of religious gatherings as a source of information in rural areas were proposals by Cunningham et al (2015). Free cervical cancer screening services in public and private health facilities is paramount to increase uptake. This would be feasible mostly where public partnership system is established easing the screening and treat strategy (Sahasrabuddhe, 2012).

The government should incorporate the human papillomavirus (HPV) vaccine in its immunization program for adolescents, and health education should be intensified to encourage women and their partners to comply with diagnostic and treatment regimens. Male partners should be encouraged to support screening of their partners (Mupepi, 2011; Huchko, 2015).

There is an urgent need to innovatively develop Pap smear self-collecting kit coupled with workshops and seminars on how to use the kits effectively. Where feasible use of incentives to those screening for cervical cancer would motivate the women at risk to turn up for cervical cancer screening and HPV vaccination. (Teng, 2018).

Research on the basic epidemiological data of HPV prevalence and genotype-distribution among women in the general population according to HIV sero status to evaluate the potential impact of HPV vaccines and cervical cancer screening strategies is essential. Vaccine trials in infants to evaluate the potential inclusion as part of an EPI standard immunization schedule are also essential. Further research is warranted to fetch enough high standard data related to cervical cancer (Kessler, 2016).

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