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PREVENTING PREVENTABLE CERVICAL CANCER IN KENYA

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SUMMARY

- Cervical cancer is a prevalent yet preventable cause of death among Kenyan women. Lack of viable vaccination, screening and treatment options, combined with a high incidence of risk are the main causal factors.
- Subsidized vaccination programs and low-resource screening procedures have been shown to reduce cervical cancer rates in other African countries, and could contribute to reducing rates in Kenya.
- A first step toward preventing cervical cancer in Kenya is government implemented national cancer screening and surveillance programming, and additional resources toward treatment centres across the country.

BACKGROUND

Cancer is the third leading cause of death in Kenya with a rate of 18,000 deaths per year (Kenya Ministry of Public Health, 2009). Cervical cancer in particular is the second most prevalent cancer among women in the country, after breast cancer, and its incidence is increasing (WHO, 2010). In many developed countries, however, the incidence of cervical cancer is decreasing due to widespread implementation of cervical screening programs. If cervical precancerous lesions are discovered through early screening and are subsequently treated, the disease becomes almost entirely preventable. With this understanding, what is preventing Kenya from controlling this disease and preventing preventable cancers, like cervical cancer, from forming?

Factors contributing to high risks of cervical cancer in Kenyan women include multiple pregnancies, early age of first intercourse, hormonal contraceptives, smoking and HIV infection (Williams et al., 1994; Gatune & Nyamongo, 2005). For a woman living with HIV, a Human Papillomavirus (HPV) infection can develop into cervical cancer more quickly than for a woman who is HIV negative

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(Yamada et al., 2008). The relatively high incidence of HIV in Kenya is an important consideration when developing a strategy against cervical cancer. A Kenyan study conducted from 2007 to 2010 found that in order to target vulnerable populations it is effective to combine cervical cancer screening with HIV testing (Huchko et al., 2011; McKenzie et al., 2011).

TOWARD AN HPV VACCINATION PROGRAM

Most cases of cervical cancer are caused by an HPV infection (Walboomers et al., 1999). HPV infections are very common and affect many sexually active men and women. According to the World Health Organization (WHO), 39 percent of Kenyan women have harboured an HPV infection at some time in their lives (WHO, 2010). An HPV infection can trigger changes within cervical cells that lead to cancer. A vaccination has been developed that prevents infection from some strains of HPV, and thus contributes to the prevention of cervical cancer.

The Kenya Pharmacy and Poisons Board approved the use of the HPV vaccination in 2007, but its purchase is not economically feasible for most Kenyans. Two vaccinations, Cervarix and Gardasil, currently cost around \$300 (all figures USD) and \$150 respectively (Medical News Today, 2007). Until the cost of these HPV vaccinations decreases or less expensive options become available, inoculation is not viable in Kenya without substantial subsidies.

PATH (an international non-profit global health organization) implemented a free HPV vaccination program in nearby Uganda, intending to simulate a national program on a small scale to provide a basis for funding and inclusion in policy making. It found that an HPV vaccination program in Uganda was feasible, and attained high coverage (PATH, 2004a). This study, along with a recent survey in Kenya that found 95 percent of women were willing to have their daughters vaccinated, indicates that an HPV vaccination program could have significant success in Kenya and should be investigated further (Becker-Dreps, 2010). In addition, other urogenital cancers such as anal, vulvar, vaginal and penile cancer, as well as other sexually transmitted diseases, can also be caused by HPV. Thus, any preventative strategy surrounding the control of HPV can also contribute to decreasing the incidences of other disorders.

THE NEED FOR IMPROVED SCREENING PROCEDURES

An effective screening strategy is important in order to capture those affected by HPV. Kenyan gynaecologist Pamela Tsimbiri Fedha states that the three biggest barriers to screening for cervical cancer from a patient's perspective are ignorance, accessibility and cost (personal communication, 2011). A study conducted at Kenyatta National Hospital in Nairobi reaffirms Fedha's account, finding that only 51 percent of the women surveyed knew what cervical cancer was, 32 percent knew what a Pap smear test was and just 22 percent had experienced one before (Gichangi et al., 2003). Another study found that other common barriers to screening were fear of abnormal results and lack of finances (Were, 2011).

Screening for cervical cancer is resource and time intensive. A study published in 2005 by the New England Journal of Medicine found that screening of 35-year-old women would reduce the lifetime risk of cervical cancer by 25-36 percent (Goldie, 2005). It was also found that in Kenya it is more effective to use screening strategies such as visual inspection of the cervix with acetic acid (VIA) or DNA testing for HPV, which requires less clinic visits and are less dependent on laboratory infrastructure (2005). Eighty percent of women in a Ugandan study were willing to collect their own cervical samples for HPV testing as the first part of a screening program, indicating that this could be a successful method in low-resource settings and others where women are uncomfortable with physical examination (Mitchell et al., 2011).

Screening strategies such as "screen-and-treat" or the "single-visit approach" may also be appropriate in low-resource settings such as Kenya. These require women who test positive for HPV to be treated immediately without further diagnostic confirmation to decrease the further use of resources. Unfortunately, at present most women are not screened until the disease is in its advanced stages and symptoms become obvious. Screen-and-treat is also a contentious strategy and currently under scrutiny due to potential false positives being treated superfluously (Suba et al., 2011). More investigation on this method of addressing cervical cancer needs to be conducted before a decision on implementation in Kenya is made.

POLICY IMPLICATIONS OF IMPROVED HPV SCREENING

With widespread implementation of screening, there will likely be an increase in the detection of early-stage cervical cancer cases and will require treatment for this group of women. Most women, however, are in advanced stages of cervical cancer when diagnosed, making curative treatment difficult and at times impossible. Kenyatta National Hospital in Nairobi is currently the only public centre in the country treating cancer and is overburdened with current caseloads, with a two month waiting list for new patients. In order to address these issues, the hospital has recently drafted a comprehensive proposal for the expansion and establishment of cancer services, and creating other cancer centres in the country (Kenya Departmental Committee on Health, 2011).

A fundamental component of a strategy to control any cancer, including cervical cancer, is the creation of a national cancer surveillance and registration system. Determining the incidence and prevalence of cancer cases is paramount to controlling the disease. Currently, there is no cancer registry in Kenya. The National Cancer Control and Prevention Bill is in the advanced stages of being tabled in Parliament and lays out for the government how to control cancer, create a National Cancer Control Institute and provide a legal framework for cancer control issues. The bill would also ensure that patients have access to affordable screening and would make it illegal for cancer treatment to be omitted from insurance coverage (Ayodo, 2011).

Kenya's Ministry of Public Health and Sanitation and Ministry of Medical Services are also in the process of implementing their National Cancer Control Strategy, which began in 2010 and runs until 2015. The strategy aims to build strong cancer prevention and control capacities both in public and private sectors through investment in awareness, human resources, equipment, surveillance and research. Specifically addressing cervical cancer, the strategy outlines a tobacco control intervention, advocates for the control of biological agents that cause cancer, and commencing HPV screening and vaccination (Kenya Ministry of Public Health and Sanitation and Ministry of Medical Services, 2009).

INTERNATIONAL AND COMMUNITY-LEVEL RESPONSES

Among the international forums addressing cervical cancer in Kenya is the 2009 conference, *Towards Prevention of Cervical Cancer in Africa*, at Oxford University, which assembled health professionals from across Africa, the WHO, representatives from the pharmaceutical industry, international oncologists and many different cancer organizations and charities. The conference delegates issued the “The Oxford Delegation” calling for global support to reduce the prevalence of cervical cancer in underdeveloped regions, particularly in Africa (Kerr, 2009).

At the community level, the Kenyan group Maendeleo Ya Wanawake is an organization that aims to empower women as a means “to alleviate poverty and create a better environment and quality of life for all.” It coordinates community health workers to perform cervical screening and actively implements projects to prevent cancers. This women’s group joined up with the Kenyan Ministry of Health, the Kenya Cancer Association and PATH to implement the Western Kenya Cervical Cancer Prevention Project, which looks to develop a model prevention program for low-resource communities. This project found that a strategy based on VIA and cryotherapy (a method of treatment) performed by nurses is able to be established and sustained in a rural setting in Kenya (PATH, 2004b).

CONCLUSION

Beyond early efforts to address the disease, there are significant gaps that require attention in the fight against cervical cancer in Kenya. Additional resources at the government level are desperately needed to facilitate subsidized services for patients and provide appropriate screening and treatment. Community health care workers, local leaders and community members are primary sources of communication; strengthening their awareness of the urgency of cancer management and prevention would be invaluable. In addition, building capacity for community-based actions, particularly through strengthening and supporting established women’s groups, would assist in controlling cervical cancer in Kenya.

WORKS CITED

- Ayodo, Harold (2010). "Women beware, breast cancer kills," *The Standard*. October 16. Available at: <http://www.standardmedia.co.ke/mag/InsidePage.php?id=2000020469&cid=620&>
- Becker-Dreps, Sylvia, Walter Atingu Otieno, Noel T. Brewer, Kawango Agot and Jennifer S. Smith (2010). "HPV vaccine acceptability among Kenyan women." *Vaccine* 28: 4859-5144.
- De Vuyst, Hugo, Maria Rita Parisi, Andrew Karani, Kishow Mandaliya, Lucy Muchiri, Salvatore Vaccarella, Marleen Temmerman, Silvia Franceschi and Flavia Lillo (2010). "The prevalence of human papillomavirus infection in Mombasa, Kenya" *Cancer Causes Control* 21: 2309-2313.
- Elit , Laurie, Barry Rosen, Waldo Jimenez, Christopher Giede, Paulina Cybulska, Sarah Sinasac, Jason Dodge, Erdenejargal Ayush, Orango Omenge, Marcus Bernardini, Sarah Finlayson, Jessica McAlpine, and Dianne Miller (2010). "Teaching Cervical Cancer Surgery in Low- or Middle- Resource Countries." *International Journal of Gynecological Cancer* 20: 1604-1608.
- Gatune, Jane W. and Isaac K. Nyamongo (2005) "An ethnographic study of cervical cancer among women in rural Kenya: is there a folk causal model?" *International Journal of Gynaecological Cancer* 15: 1049-1059.
- Gichangi Peter B., Joba Bwayo, Benson Estambale, Hugob De Vuyst, Shadrack Ojwang, Khamac Rogo, Henryd Abwao and Marleenb Temmerman (2003). "Impact of HIV infection on invasive cervical cancer in Kenyan women." *AIDS* 17: 1963-1968.
- Goldie, Sue J., Lynne Gaffikin, Jeremy D. Goldhaber-Fiebert, Amparo Gordillo-Tobar, Carol Levin, Cedric Mahe and Thomas C. Wright (2005). "Cost-effectiveness of cervical-cancer screening in five developing countries." *New England Journal of Medicine* 353: 2158-2168
- Huchko, Megan J., Elizabeth A. Bukusi and Craig R. Cohen (2011). "Building capacity for cervical cancer screening in outpatient HIV clinics in the Nyanza province of western Kenya" *International Journal of Gynecology and Obstetrics*.

Kenya Departmental Committee on Health (2011). *Policy Brief on the Situational Analysis of Cancer in Kenya*. Nairobi. Available at: http://www.parliament.go.ke/index.php?option=com_docman&Itemid=88&task=doc_download&gid=637

Kenya Ministry of Public Health and Sanitation and Ministry of Medical Services (2009). *Draft National Cancer Control Strategy 2010-2015*. Nairobi. Available at: http://www.ipcrc.net/pdfs/intl_programs/Final-Draft-of-the-Kenya-Cancer-Control-Strategy-April-2011.pdf

Kerr, David (2009). "Towards Prevention of Cervical Cancer in Africa – Report from Meeting at St. Catherine's College, Oxford" (Oxford, England: 26-27 March, 2009).

McKenzie, Kevin P. McKenzie, Robyn K. Rogers, Julia W. Njoroge, Grace John-Stewart, Barbra A. Richardson, Nelly R. Mugo, Hugo De Vuyst, Ritesh N. Pamnani, Farzana S. Rana, Danson Warui and Michael H. Chung (2011). "Cervical Squamous Intraepithelial Lesions Among HIV-Positive Women on Antiretroviral Therapy in Kenya" *Current HIV Research* 9: 180-185.

Medical News Today, (2005) "Kenya's Pharmacy And Poison Board Approves Marketing GlaxoSmithKline's HPV Vaccine Cervarix," September 5. Available at: <http://www.medicalnewstoday.com/releases/81239.php>

Mitchell, Sheona, Gina Ogilvie, Malcolm Steinberg, Musa Sekikubo, Christine Biryabarema and Deborah Money (2011). "Assessing women's willingness to collect their own cervical samples for HPV testing as part of the ASPIRE cervical cancer screening project in Uganda." *International Journal of Gynecology and Obstetrics* (2011).

PATH (2004a). *Shaping a Strategy to Introduce HPV Vaccines in Uganda*. Seattle. Available at: http://www.rho.org/files/PATH_FRTS_Uganda.pdf

PATH (2004b). *Western Kenya Cervical Cancer Prevention Project (WKCCPP)*. Seattle. Available at: http://www.path.org/files/RH_wkccpp_final_report.pdf

Suba, Eric J., Pamela M. Michelow, Colleen A. Wright, Stephen S. Raab (2011). "Re: Preventing Cervical Cancer Globally by Acting Locally: If Not Now, When?" *Journal of the National Cancer Institute*.

Walboomers, Jan M. M., Marcel V. Jacobs, M. Michele Manos, F. Xavier Bosch, J. Alain Kummer, Keerti V. Shah, Peter J.F. Snijders, Julian Peto, Chris J., L.M. Meijer and Nubia Munoz (1999). "Human papillomavirus is a necessary cause of invasive cervical cancer worldwide" *The Journal of Pathology* 189: 12-19.

World Health Organization (2010). *Human Papillomavirus and Related Cancers: Kenya*. Available at: http://apps.who.int/hpvcentre/statistics/dynamic/ico/country_pdf/KEN.pdf

Williams, Michelle A., Patrick R, Kenya, J.K.G. Mati and David B. Thomas (1994). "Risk factors for invasive cervical cancer in Kenyan women." *International Journal of Epidemiology* 23: 906-912.

Yamada, Rika, Toshiyuki Sasagawa, Leah W. Kirumbi, Alan Kingoro, Dominic Karanja, Michael Kiptoo, George W. Nakitare, Hiroshi Ichimura and Masaki Inoue (2008). "Human papillomavirus infection and cervical abnormalities in Nairobi, Kenya, an area with a high prevalence of human immunodeficiency virus infection." *Journal of Medical Virology* 80: 847-855.

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