

Epidemiology of High Risk Human Papillomavirus and Factors affecting Cervical Cancer
Screening amongst Volunteer Adult Women in Thika Municipality, Kenya

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A Thesis Submitted in Fulfillment for the Degree of Doctor of Philosophy in Epidemiology in
the Jomo Kenyatta University of Agriculture and Technology

2011

ABSTRACT

Cancer of the cervix is the leading type of cancer in women in sub-Saharan Africa. Human Papillomavirus (HPV) has been recognized as the central causal agent of cervical cancer. The general objective of this study was to determine the epidemiology of high risk Human Papillomavirus and factors affecting cervical cancer screening among volunteer adult women in Thika Municipality, Kenya. Adult women from Thika Municipality were invited to volunteer participation in the study. This was a descriptive cross sectional study where a total of 498 volunteer adult women who responded, consented and fit the inclusion criteria were recruited. Data was collected using questionnaires, in-depth interviews and laboratory analysis. The analysis carried out included: visual inspection of the cervix using acetic acid and Lugol's iodine, Pap staining, CINtec® P16INK4a and Plus staining, high risk Human Papillomavirus DNA isolation and characterization. The mean age of the study participants was 36 years ranging between 18 and 74 years old with 66.9% being married. Lack of knowledge of cervical cancer was a major barrier to uptake of screening. The prevalence of high risk HPV was 20.7 % with HPV 16 and HPV 52 being the most prevalent at 4.6% and 3.8% respectively. The highest level of HR HPV prevalence, 28.1%, was observed in the age group of 29 years and below. There was a marked decline in the prevalence of HR HPV with Cervical Intraepithelial Neoplasia (CIN). This decline was observed in women who tested negative for CIN 19.3% and increased in those who tested positive for CIN 81.8%. High risk HPV 16 was the most prevalent in high grade lesions at 64.6%. There was significant level of association observed between level of education completed, experience with health care delivery system, episodes of low abdominal pains and low back pain with the occurrence of at least one HR HPV ($p < 0.05$). Marital status, history of cervical cancer in the family and episodes of low abdominal pains were found to be confounders in the association of HR HPV 16 and 18 and the other HR HPV isolated in this study. There was a significant association between the CINtec® Plus staining and Pap test results ($p < 0.001$, 24.11 [95%CI=L-H]). The study highlights the major barriers to women uptake of cervical cancer

screening as well as the high prevalence, 20.7%, of HPV infections with low rate, 17.3%, of cervical cancer screening history. Health promotion efforts need to focus on increasing women's knowledge on risk factors and enhancing their perceived health control by providing more information on the link between screening and early detection with lower incidence rates and mortality from cervical cancer. Furthermore, it is necessary to develop and implement a screening program that is easily accessible to a large at risk population, customized to specifically address those factors that might constitute major obstacles to effective uptake of screening.