

Statistical investigation of risk factors of squamous intraepithelial lesions of the cervix and factors associated with loss to follow up among HIV-infected women in Dar es Salaam

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This work addresses the correlates of squamous intraepithelial lesion and loss to follow up among HIV—infected women receiving care and treatment in Dar es Salaam health facilities. The goal is to inform policy makers on the screening of cervical cancer, to improve screening coverage and access to quality care. Furthermore, to inform programme improvement and design of interventions to reduce LTF rates among sick women. Records of the de-identified dataset from NACP showed that between December 2006 and August 2009, 1365 women were screened for cervical cancer in HIV clinics in Dar es Salaam and 91% of them were on antiretroviral therapy. The prevalence of abnormal smear was 9% (119/1365), of which 4% (53/1365) had low-grade SIL and 3% (47/1365) had a high-grade SIL. Using generalized estimating equations for repeated log binomial data, it was found that women aged 50 and above and those with CD4+ cell count <100 cells/p L had an independent significantly increased risk of cytological abnormalities with ($RR: 2.34, 95\% CI 1.33 — 4.14, p < 0.001$) and ($RR: 1.58, 95\% CI 1.46 — 1.73, p < 0.0001$) respectively. Moreover, among 38,017 women followed between October 2008 and December 2012, 79% were on ART. The overall rate of loss to follow up among women was 35.6%. We employed Cox proportional hazard regression model to identify the risk factors for LTF. Patients on care were significantly more likely to be LTF compared to patients on ART. Patients with higher HIV stage were found to have significantly increased hazard of LTF ($HR: 1.48, 95\% CI 1.29 — 1.69, p < 0.0001$). Screening policy of cervical cancer and retention strategies of patients in HIV clinics is required.