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Recommended Citation
New-Aaron, Moses; Meza, Jane L.; Goedert, Martha; Kibusi, Stephen; Sumba, Samwel; Damien, Caroline; Shabani, Siraj; and Charles, James, "Cervical Cancer Screening among Patients Receiving ARVs in a Resource-Limited Environment" (2018). Posters and Presentations: College of Public Health. 8.  
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Cervical Cancer Screening among Patients Receiving Antiretroviral Treatment in a Resource-limited Environment

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Background

**Global burden of cervical cancer**

- This is a cross-sectional study. A study questionnaire was developed based on previous studies (Ezechi et al., 2013, Getahun et al., 2013, and Sichanh et al., 2017).

**Pathophysiology of HIV and cervical cancer**

- Awareness of cervical cancer were higher among urban dwellers and participants.

**HIV prevalence and cervical cancer incidence**

- The mean age of the participants was 44.12 years old.
- The majority of the participants had a primary education or higher.
- Average monthly income was $39.45 (US dollars, $244.4).
- The majority of the participants have no regular monthly income.
- Most (79.30%) of the subjects were unmarried, they were either never married (48.16), divorced, widowed or separated (42.37, 34%)
- A total of 137 (36%) had at least three live births.
- Menarche and disease progression of the participants were observed based on other age groups (18-29 and ≥40).

**Objectives**

- Evaluate the uptake of cervical cancer screening of women receiving ARV treatment in HIV Care and Treatment Center (CTC), Dodoma, and to identify the characteristics of patients who were screened.
- Examine the willingness to be screened for cervical cancer by women receiving ARV treatment at HIV CTC.
- Determine factors associated with the willingness to be screened and the uptake of cervical cancer screening among women receiving ARV treatment in Dodoma.

**Methods**

**Study Design**

- This was a cross-sectional study. A study questionnaire was developed based on previous studies (Ezechi et al., 2013, Getahun et al., 2013, and Sichanh et al., 2017).

**Inclusion criteria**

- The study population included all women diagnosed as HIV positive and attending the HIV CTC in Dodoma Regional Referral Hospital (DRRH).

**Exclusion criteria**

- Patients who were traveling through Dodoma and needed to visit HIV CTC DRRH for refills were described as patient in-transit and were excluded from the study.

**Data collection**

- Data were collected for a period of 3 weeks from July 21 to August 11, 2017.
- The questionnaires were designed on Open Data Kit (ODK) using a platform called Kobo Toolbox (Heunis et al., 2014).

**Statistical analysis**

- A total of 421 women participated in the study.
- The outcome variables used in the analysis were: Awareness, Prior uptake of cervical cancer screening, Willingness to screen, and Willingness to be screened.
- Associations between the participant characteristics and the outcomes were determined using Pearson chi-square/Fisher exact test.
- Factors with p-value >0.02 were included in a logistic regression model.
- An alpha level of p<0.05 was accepted as statistically significant.

**Findings**

**Willingness to screen**

- Willingness to screen was found higher for younger than older participants.

**Prior uptake of cervical cancer screening**

- Prior uptake of cervical cancer screening was higher for urban dwellers vs. rural dwellers.

**Factors associated with willingness to screen among those aware**

- Willingness to screen was found higher for participants who were older than 17 years and younger than 51 years old were eligible because cervical cancer screening services are only available for individuals within this age range (18-50) in Tanzania.

**Discussion**

- Good treatment outcomes among participants was observed based on the BMI and disease progression of the participants (Fig 1).
- Low uptake level of cervical cancer screening was observed despite high level of awareness (Fig 2).
- This was observed in a similar study in Dar es Salaam (Lakorkin et al., 2017).
- Awareness of cervical cancer were higher among urban dwellers and participants age 50.39 compared to other age groups (18-29 and ≥40) (Table 1).
- Prior uptake of screening was higher for urban dwellers vs. rural dwellers and women (1.2 livebirths vs. no livebirths) (Table 2).
- This was validated by a similar finding in Nigeria (Nwankwo et al., 2011).
- Participants who were recently diagnosed of HIV were more likely to be willing to screen compared to those diagnosed longer (Table 3).
- Similar findings was observed in Nigeria (Ezechi et al., 2013).
- Willingness to screen was found higher for younger participants vs. older participants (Fig 3).

**Limitations**

- Possibility of interview bias.
- Different approaches to data collection was not specified during data collection.
- Access to screening.

**Conclusion and Future Directions**

- 90% of patients in this study receiving antiretroviral drugs (ARVs) for HIV expressed willingness to participate in cervical cancer screening.
- Although willingness was higher among younger than older participants.
- The older patients should be targeted when strategizing prevention plans and education.
- We recommend additional education for both patients and providers on cervical cancer.
- Integration of cervical cancer screening services at the HIV clinic.

**References**