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Abstract #: *2.013_INF*

An Analysis of Viewer Engagement in YouTube Videos Related to HIV/AIDS Awareness and Prevention

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Background: Everyday approximately a billion viewers watch hundreds of millions of hours on YouTube. Currently YouTube videos are used as internet based media for dissemination of public health information. To characterize viewer engagement pattern, we measured viewership, viewer-preferences and viewer-responses to the HIV/AIDS awareness and prevention related videos on YouTube.

Methods: We performed a search on YouTube (www.youtube.com) using the keywords 'HIV/AIDS awareness', 'HIV/AIDS prevention', and 'HIV/AIDS education. YouTube videos possessing ≥5000 viewership were selected for analysis. Viewer engagement was measured by recording total number of views, likes, dislikes, shares, and comments. Views per day were calculated by dividing total number of views by number of days since upload. Number of reaction was obtained by combining number of likes and dislikes. To assess differences in continuous variables across different categories, non-parametric Kruskal-Wallis test was used for non-normal distributions.

Findings: We analyzed 143 video clips of which 49% were posted by YouTube channels, 27.3% by organizations, and 23.8% by individual users. Regarding the target audience, majority (80.4%) of the videos were targeted for general public, whereas 11.2% were targeted for people living with HIV/AIDS and 8.4% for health care professionals. Cumulative numbers of views, likes, dislikes, shares, and comments for all videos were 10,491,885, 15689, 2771, 1199, and 7300, respectively. Median numbers of views, likes, dislikes, shares and comments were 14537 (IQR 8578–34394), 23 (IQR 8–58), 2 (IQR 1–7), 15 (IQR 2–48), and 7.5 (IQR 2–25.75), respectively. Median number of views per day was 9.82 (IQR 5.07–27.2), and median number of likes per 100 reactions was 93.02 (IQR 83.22– 98.14). The Kruskal-Wallis test showed that there was a statistically significant difference in number of comments between different upload sources ($p = 0.002$). Mean-rank of comments was highest for individual-posted videos (82.56), followed by YouTube channel videos (66.24), and was lowest for organization-posted videos (49.97). Other measurements of viewer engagement did not show any significant difference across different upload sources or target audiences.

Interpretation: Because a considerable number of viewers interact with HIV/AIDS related videos on YouTube, YouTube could be a useful platform for HIV/AIDS awareness and prevention.

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Human Papillomavirus (HPV) and Pap Smear Testing among HIV+ Women in La Romana, Dominican Republic, 2015-2016

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Background: Sexually transmitted infections (STIs) are major health issues in the Dominican Republic. Little is known about the prevalence of common STIs, such as human papillomavirus (HPV), as comprehensive screenings are not available to the general population. HPV infection can cause abnormal Pap smear results, and can eventually lead to cervical cancer if gone undiagnosed; HIV+ women are at elevated risk of HPV disease progression to cervical cancer. One of the aims of *Estudio de Prevalencia de Infecciones de Transmisión Sexual en Poblaciones Claves* (EPIC) is to assess HPV and abnormal cytologies among HIV+ women. The study participants in this analysis were recruited from Clinica de Familia La Romana (CFLR) HIV clinic.

Methods: This project is a retrospective study of the HIV+ population, specifically HIV+ women, and aims to: (1) Identify the patients with HPV and/or abnormal Pap smears, (2) describe these patients according to their clinical, demographic, and social characteristics, (3) describe the colposcopy results of patients with HPV and/or abnormal Pap smears, (4) describe the frequency of different strains of HPV and abnormal Pap results, (5) identify the patients who have not returned for their follow-up appointments at the clinic through a chart review and secondary data analysis.

Data sources include EPIC study data (test results and sociodemographic information) and patient clinical data (e.g. CD4 counts and viral load). The abstracted data was entered into Microsoft Excel and merged with EPIC study analyzed using SAS Studio.

Findings: Fifty-six percent of the 104 women tested positive for HPV and/or had an abnormal Pap smear. Sixteen-percent of women with HPV and/or abnormal Pap results did not return to clinic; 46% of those referred for colposcopy did not complete it.

Thirty percent of the women who had a colposcopy were found with Grade I Cervical Intraepithelial Neoplasia (CIN I) and eleven-percent had exocervical colposcopy results of hyperplasia, atrophied changes, or koilocytosis. Three percent of the women who had a colposcopy were diagnosed with cervical cancer.

Interpretation: The high prevalence of positive HPV and abnormal Pap results demonstrates the importance of routine testing, especially for HIV+ women. Equally important is encouraging patients to attend their follow-up appointments.

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