Characterizing Undiagnosed and Incident STIs in an HIV Vaccine trial Cohort in South Africa (HVTN 702)

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Background

According to the World Health Organization (WHO), sub-Saharan Africa leads the world in incidence rates of chlamydia, gonorrhea, and trichomonas[1]. Sexually transmitted infections (STIs) are associated with reduced quality of life, neonatal deaths and increased disease susceptibility. Despite efforts in public health, among those with STIs, the risk of contracting HIV remains at an all-time high[2].

The aim of this secondary analysis was to extrapolate the prevalence and incidence of STIs, within a cohort, as supporting evidence to guide future public health efforts and resources.

Methods

This analysis was conducted as a cross-sectional and longitudinal examination of the data supplied by the primary HVTN 702 HIV Vaccine Trial[3]. The 2016-2019 trial took place in South Africa where participants were tested for STIs and completed multiple behavioral-risk questionnaires.

Participant demographics, social and education status, testing and screening results of the four non-HIV infections (Chlamydia, Gonorrhea, Syphilis and Trichomonas*), and a comprehensive sexual and social history were collected as data, further analyzed using STATA.

Results

Our initial results show the study prevalence of each non-HIV sti tested (Chlamydia, Gonorrhea, Syphilis and Trichomonas*) over various variables including, but not limited to: age, sex assigned at birth, housing status and sexual engagements.

Without yet calculating for significance, here are some of the preliminary observed results:

- The age group most burdened by disease was 18 –21 for all non-HIV infections (except for females who had a higher prevalence for syphilis in the 22–25-year range).
- The study prevalence of disease was highest for Chlamydia.
- For those who engaged in sexual intercourse for the first time younger than 18 years of age, the study prevalence of any non-HIV STI was greater than older groups.

Conclusion

These results give specific categories in which we observed higher study prevalence of disease and indicate STI burden. We can identify sites, as well as behaviors and socioeconomic variables, which may contribute to higher risk. As we continue to add statistical value to our observations, we believe this analysis will support advancing public health efforts to yield the most effective disease prevention strategies and targets.

*Indicates testing done only for female-assigned-at-birth participants

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