Feasibility and Acceptability of Symptom Screening of Sexually Transmitted Infections HPTN 071 (PopART) Trial in Zambia and South Africa


INTRODUCTION

It is estimated that worldwide there are more than 700 million new infections with viral STIs and 357 million new infections with one or more curable STIs (chlamydia, gonorrhea, syphilis and trichomoniasis) in people between the ages of 15 and 49 years in LMIC (WHO 2016). STIs other than HIV have been outshined in recent years by the intensified public-health attention on HIV treatment, in spite of the solid association between STIs and HIV acquisition. Many high income countries have developed quality services for diagnosis and treatment of STIs. Low and middle income countries (LMICs) lag far behind (WHO 2012). Therefore a syndrome-based approach to the management of STIs was developed and is commonly used in resource-limited settings for the management of common STIs (WHO 2016). Modelling studies have revealed that STIs may have critically contributed in helping HIV to be established in new populations. These studies have also shown that proportion of new HIV infections attribute to STIs remains significant all through the epidemic, although this effect is increasingly due to genital herpes rather than curable STIs (Hayes, Watson-Jones et al 2010)

RESULTS

Overall over 95% of the households were enumerated in Zambia. We listed on average 2,850 household members. 15 years or older in a household (127,304 in Zamb) compared to 2,501 household members (66,569/26,670) in SA. The contact ratio in Zambia was 1,502/1 in Zambia and 98.3% in SA. A typical counselling session took approximately between 15 to 30 minutes per participant, of which on average 3 minutes was spent on the STI screening.

METHODS

HPTN 071 (PopART) is a 3-arm community-randomized trial in 21 communities, 12 in Zambia and 9 in South Africa, to determine the impact of a combination HIV prevention package, including universal HIV testing and treatment, on HIV incidence. Community HIV-care providers (CHiPs) delivered the intervention from 2013 to 2017 in 14 intervention communities. Services were offered to all households using a community-based approach to HIV counselling and testing, TB symptom screening, condom provision, referral for male circumcision and STI symptom screening. CHiPs referred participants for HIV-care and treatment, TB-diagnosis and treatment, STI services and male circumcision if needed. All households were visited at least once per year (annual round). Within an annual round visits were made to follow up household members who missed the first CHiP visits, for those who did not complete the intervention or for individuals that were referred for health services at the clinic. Three annual rounds were conducted during the intervention period 2013-2017. We report on the last (3rd) annual round.

Verbal consent was obtained for individuals 18 years and older, for those <18 verbal consent and assent was obtained. For those aged 15 years and above, a standard STI screening tool was delivered to identify signs or symptoms suggestive of an STI (presence of genital soreness/growth, vaginal/urine smell, discharge from penis or vagina, lower abdominal pains), if the individual answered yes to one or more of the symptoms then he/she was referred to the local primary health care facility for further investigation and STI care. Individuals were also tested for HIV. Those self-reported HIV positive but not in HIV care, and those testing negative were referred to the clinic for HIV care and treatment. One month after referral the CHiPs attempted to revisit the home and follow up on the client.

Data was collected in an electronic Data Capture (EDC) to monitor services delivered at the household, including data on the STI symptom screening. We used multivariate random effects logistic regression modelling to estimate adjusted odds ratios with any symptom of STI reported as dependent variable. Explanatory variables were limited to those variables collected by CHiPs. To account for variation in CHiPs performance, CHiPs zone was added as a random effect.

We considered knowledge of HIV status, sex (male and female), and whether there was previous participation in the intervention as additional factors of analytical interest in this sub study of the full trial, we used arm A data for both countries.

We report results of STI symptom screening for 7 out of 14 intervention communities (arm A communities) for the period September 2016 to December 2017. In arm A communities the full PopART intervention package was offered including immediate HIV treatment.

Figure 1: Flowchart sharing number of individuals 15+ years and those screened for STIs

Large scale community-based STI symptom screening by lay counsellors can easily be performed as part of door-to-door service delivery.

The study showed 1.3% prevalence rate for STI symptoms. STI symptom were more common among those newly diagnosed with HIV and more commonly among young adults in both countries. Community members that previously participated in the intervention and were screened negative for STI, have lower odds for being STI symptomatic (Zambian only).

Conclusions

1. Community-based symptom screening can be performed during household visits.

2. Large scale population screening can be implemented easily by community-based health workers.

3. More than 1% of individuals in the community were symptomatic for STI.

4. Close to 2% of individuals in the community had a positive result for STI.

5. STI testing is needed to determine the burden of STI in the community.

6. The intervention may have contributed to a reduced prevalence of STI in the community.

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