The PopART intervention was delivered door-to-door in three annual rounds (R1-R3) by Community HIV-care Providers (CHiPs) who provide home-based counselling and HIV testing services as well as provision of other HIV prevention services including condom provision, referrals for prevention of mother-to-child transmission (PMTCT), and referrals for voluntary medical male circumcision (VMMC). CHiPs made repeat visits to HIV-positive individuals during each annual round to monitor linkage to care and retention on Antiretroviral Therapy (ART).

The aim of this analysis was to provide estimates of retention on ART, in the absence of routine viral load testing, among individuals in seven communities that were randomised to receive the full PopART universal test and treatment intervention from the start of the trial (Arm A).

**METHODS**

The analysis included participants in R3 of the PopART intervention (September-December 2017) from 21 arms, aged 18+, known to the CHiPs as HIV positive and who have self-reported ever taking ART either during R3, or at a previous annual round. An individual was classified as “retained on ART” at a CHiP visit if they self-reported taking ART within the last month (checked by CHiPs by confirming with an individual clinic card) and also reported not missing any pills in the last three days.

A cross-sectional measure of self-reported retention during R3 was defined as the proportion of participants who, on the date of the R3 visit, were retained on ART during R3, for those who had ever been on ART.

The estimate of retention on ART at six months was defined using an individual’s self-reported ART start date, obtained either at the R3 visit or a previous CHiP visit. The earliest CHiP visit after six months after the ART start date (up to a maximum of 18 months) was defined, and the retained on ART status was taken from that visit. If no visit took place within that window, a CHiP visit between six and nine months was accepted. A 12-month retention measurement was obtained in the same manner, with a window for the relevant CHiP visit within 12-24 months after ART start date.

Individuals were also classified by whether the R3 CHP visit was their first participation in PopART or, if they had participated previously in rounds 1 and/or 2, it was thought that they had a history of information about a participants HIV status and ART usage the information was likely to be more reliable compared to those first participating in R3.

**RESULTS**

In the four Zambian communities, using the cross-sectional measure of retention, on the date of the R3 visit 95.5% (5,491/5,702) adults were retained on ART. Retention to those who initiated ART after the start of the intervention (in PopART) in 2014, 94.1% (4,882/5,186) were classed as retained on ART.

A corresponding analysis in the three SA communities identified 94.6% (4,399,651) adults were retained on ART with a slightly lower proportion, 93.5% (2,702,427) retained among those who initiated ART post-2014. Retention among women using this measure was slightly higher when men and women.

A difference was observed when stratifying the data on whether an individual first participated in the PopART intervention in R3 or had participated previously in R1 and R2. Those who had the first visit for the first time had much higher estimated retention on ART than those where a history of CHP visits was available. In Zambia 96.4% of those participating for the first time were estimated to be retained on ART compared to 96.2% in prior participants. In SA the figures were estimated as 96.1% and 85.4% respectively.

**CONCLUSION**

Overall self-reported retention was high. The estimates from individuals who participated in R1 and/or R2 are considered the most reliable, as they are based on a history of CHP follow-visits rather than relying on a single self-report at the start of R3. Among this group, six-month retention on ART was estimated to be 93.5% in Zambia and 89.4% in SA. Twelve month retention was estimated to be 94.4% in Zambia and 90.5% in SA.

The main limitation of this analysis is that it relies on self-reported data on retention. Although CHiPs do inspect clinic cards, which could be prone to bias. However in the absence of routine viral load testing these data provide much richer detailed information about the retention on ART within the PopART trial is high, which is a necessary component in order to meet the 90-90-90 targets.

**ACKNOWLEDGMENTS**

PopART is sponsored by the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), (U19 AI059155). The program is supported by the National Institute of Mental Health (NIMH) through its Associate Director for International HIV/AIDS, 2004-2015. PopART is also supported by the Doris Duke Charitable Foundation and the Edwin L. Whitmore Endowment Fund. A complete list of program funded partners can be found on the project website (www.popart.org). The authors have no conflicts of interest. The authors have no conflicts of interest. The authors have no conflicts of interest. The authors have no conflicts of interest.