ART Coverage After Two Years of a UTT Intervention in Zambia: Findings from HPTN071

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BACKGROUND

- The lack of effect of a universal test-and-treat (UTT) intervention on population-level HIV incidence reported by the TasP study emphasized the importance of high ART coverage.
- HPTN 071(PopART) is a community-randomized study in 21 urban communities in Zambia and South Africa, testing the impact on HIV incidence of a household-based combination HIV prevention approach (Arms A & B) provided by community-HIV-care-providers (CHiPs), compared with standard-of-care (Arm C).
- We present data on ART coverage, time to start ART after referral to HIV care by CHiPs, and retention on ART, among adults who participated in annual round 2 of the CHiP intervention in the 4 communities in Zambia that were randomized to be offered the PopART UTT package.
- ART coverage and retention on ART must be high, and time to start ART after an HIV+ diagnosis rapid, if UTT interventions are to be effective in reducing HIV incidence at population level.

Photographs of CHiP teams in Zambia who deliver the PopART intervention:
(a) outside a government health clinic where ART is provided; (b) providing household-based rapid HIV testing

METHODS

PopART INTERVENTION

- In 4 Zambian communities, from November 2013 CHiPs have delivered the "PopART" UTT package in annual "rounds", during which they (re-) visit all households. CHiPs refer HIV-positive (HIV+) individuals to routine HIV clinic services, with re-visits to support linkage to HIV care and retention in care. Round 1 (R1) was from November 2013 to June 2015.
- Round 2 (R2) was from June 2015–October 2016.
- CHiPs record information on household location, the name and age and gender of all household members, and health counselling information for those who participate in the intervention, on electronic registers.

OUTCOMES AND DATA ANALYSIS

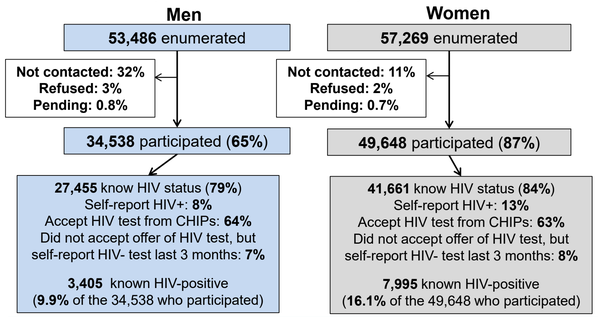
- Included in analysis were **adults (≥18 years) who participated in R2 and were "known HIV+"** because they either **confirmed their HIV+ status as recorded in round 1 (R1), self-reported they were HIV+ for the first time in R2, or they were newly diagnosed HIV+ by the CHiPs in R2**.
- Most analyses were done separately for men and women.
- Our main outcomes, *all based on self-reported data*, were:
  - the **percentage on ART by the end of R2**, among known HIV+ adults who were still resident at the end of R2 according to the last CHiP follow-up visit in R2;
  - the **percentage retained on ART *on the date of consenting to participate in R2***, among known HIV+ adults who had ever taken ART;
  - the **time to start ART after CHiP referral in R2**, including a comparison with the time to start ART after CHiP referral in R1.
- Time to start ART after CHiP referral was estimated using the Kaplan-Meier method for "time-to-event" analysis.

RESULTS

PARTICIPATION IN THE INTERVENTION IN ROUND 2

- By the end of August 2016, 45,616 households had been visited by CHiPs in R2, ~95% of all households in the community. Among visited households, 95% consented to the intervention being (re-) explained to them and to all household members being listed on an electronic register.

Flow chart 1. Participation in the intervention in R2, and number of "known HIV+" adults



ART COVERAGE AT THE START OF ROUND 2

- On the date of consenting to participate in R2, **64% (n=2,196/3,405) of known HIV+ men and 69% (n=5,504/7,995) of known HIV+ women self-reported that they were on ART** (Table 1).
- These figures were substantially higher than those of ~50% at the start of R1.

Table 1. HIV diagnosis & history of HIV care immediately after Round 2 visit, among adults known by the CHiPs to be HIV+

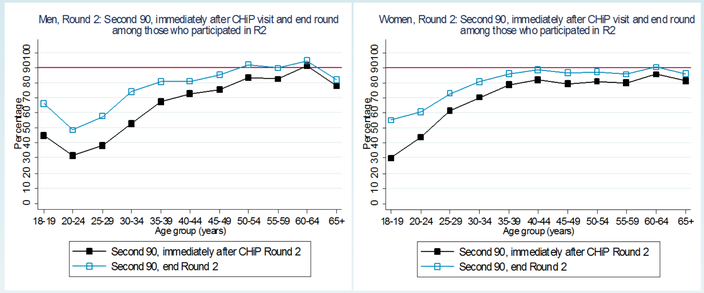
	Total known HIV+	Newly diagnosed HIV+ by CHiPs	Self-reports HIV+			
			Never previously registered for HIV care	Previously in care but never on ART	Previously in care and on ART, not currently on ART	**Currently on ART**
Men	**3,405**	**24%**	7%	2%	3%	**64%**
Women	**7,995**	**20%**	7%	2%	2%	**69%**

RESULTS AND CONCLUSION

ART COVERAGE BY THE END OF ROUND 2

- **By the end of R2, among those still resident according to the last CHiP visit in R2, 78% of known HIV+ men and 79% of known HIV+ women were on ART.**
- The percentage on ART increased between the start and end of R2 across the age range, and remained higher among older than younger adults at the end of R2 (Figure 1)

FIGURE 1. ART coverage (second 90) estimates in Round 2, by gender and age group



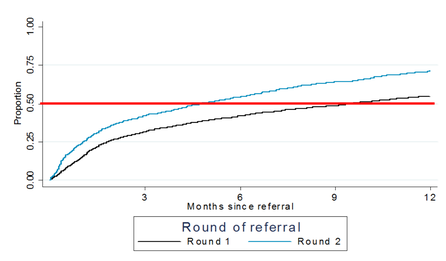
RETENTION ON ART, ON DATE OF FIRST PARTICIPATING IN ROUND 2

- **Among known HIV+ adults who participated in Round 2, and reported to CHiPs at least once (either at the round 2 annual visit, or at any point during round 1) that they had *ever* taken ART: on the date they first participated in R2, 92% (2,154/2,329) of men and 95% (5,424/5,730) of women self-reported that they were on ART and missed 0 pills in the last 3 days (Table 2).**

Table 2. Self-reported retention on ART on the date of first participation in Round 2, among adults who ever reported (in R1 and/or R2) to CHiPs that they have taken ART

	Men	Women
Adults who reported starting ART 2014-2016	91%	93%
Adults who reported starting ART before 2014	93%	96%

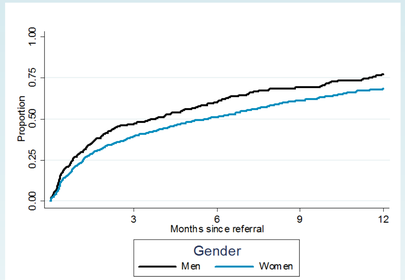
Figure 2. Time to start ART after CHiP referral to care, by round in which referral was given



TIME TO START ART, AFTER CHIP REFERRAL TO CARE

- Among HIV+ adults who were referred to HIV care and were not on ART on the date of referral, the estimated percentage who had initiated ART by 6 months after referral to HIV care increased from ~40% in R1 to ~55% in R2 (Figure 2). The median time to start ART was ~5 months in R2, compared with ~9.5 months in R1.
- The time to start ART after referral to care was slightly faster for men than women in R2 (Figure 3).

Figure 3. Time to start ART after CHiP referral to care in R2, by gender



CONCLUSION

- Among adults known by the CHiPs to be HIV+, the percentage on ART approached 80% by the end of R2, lower among younger than older adults. Self-reported retention on ART was high.
- Increased attention will be given in R3 to facilitating linkage to HIV care among young adults.
- The time to start ART after referral by CHiPs was shortened in R2 compared with R1. This was likely attributable to several factors including an increased focus of the CHiPs on linkage to care in R2 compared with R1, an increasing familiarity with and acceptance of the CHiP intervention with time, and increased coordination with the clinic to facilitate linkage.

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