

BACKGROUND

- HIV treatment has clear Health-Related Quality-of-Life (HRQoL) benefits.^{1,2} However, little is known about how Universal Testing and Treatment (UTT) for HIV affects HRQoL.³
- Using data from HPTN 071 (PopART), we examined the effect of a combination prevention intervention, including UTT, on HRQoL among people living with HIV.^{4,5}

METHODS

- HPTN 071 (PopART) was a three-arm cluster randomised controlled trial in 21 urban and peri-urban communities in Zambia and South Africa, performed between 2013 and 2018.^{4,5}
- In the trial, Arm A communities received the full UTT intervention of door-to-door HIV testing plus access to antiretroviral therapy (ART) regardless of CD4 count, Arm B communities received the intervention but followed national treatment guidelines (universal ART from 2016) and Arm C communities received standard care (Fig. 1).
- The intervention effect was measured in a general population cohort of randomly selected adults (18-44 years) in randomly selected households, using data from baseline, 12 months, 24 months and 36 months.
- In the cohort, HRQoL scores (range: 0-1), and the prevalence of problems in five dimensions of HRQoL (mobility, self-care, performing daily activities, pain or discomfort, and anxiety or depression) were assessed using the EuroQoL-5-dimensions-5-levels questionnaire (EQ-5D-5L).⁶
- For this analysis, data from people living with HIV with laboratory confirmed HIV status were selected. This means that the data included was from people living with HIV in the general population, rather than a sample of people with advanced disease. The people living with HIV did not have to know their status to be included in the analysis.
- HRQoL at 36 months was compared between the trial arms using two-stage cluster-level analyses, controlling for baseline imbalances in language(s) used to complete the survey (as this may affect interpretation of the EQ-5D-5L), wealth and HRQoL, as well as age and gender.

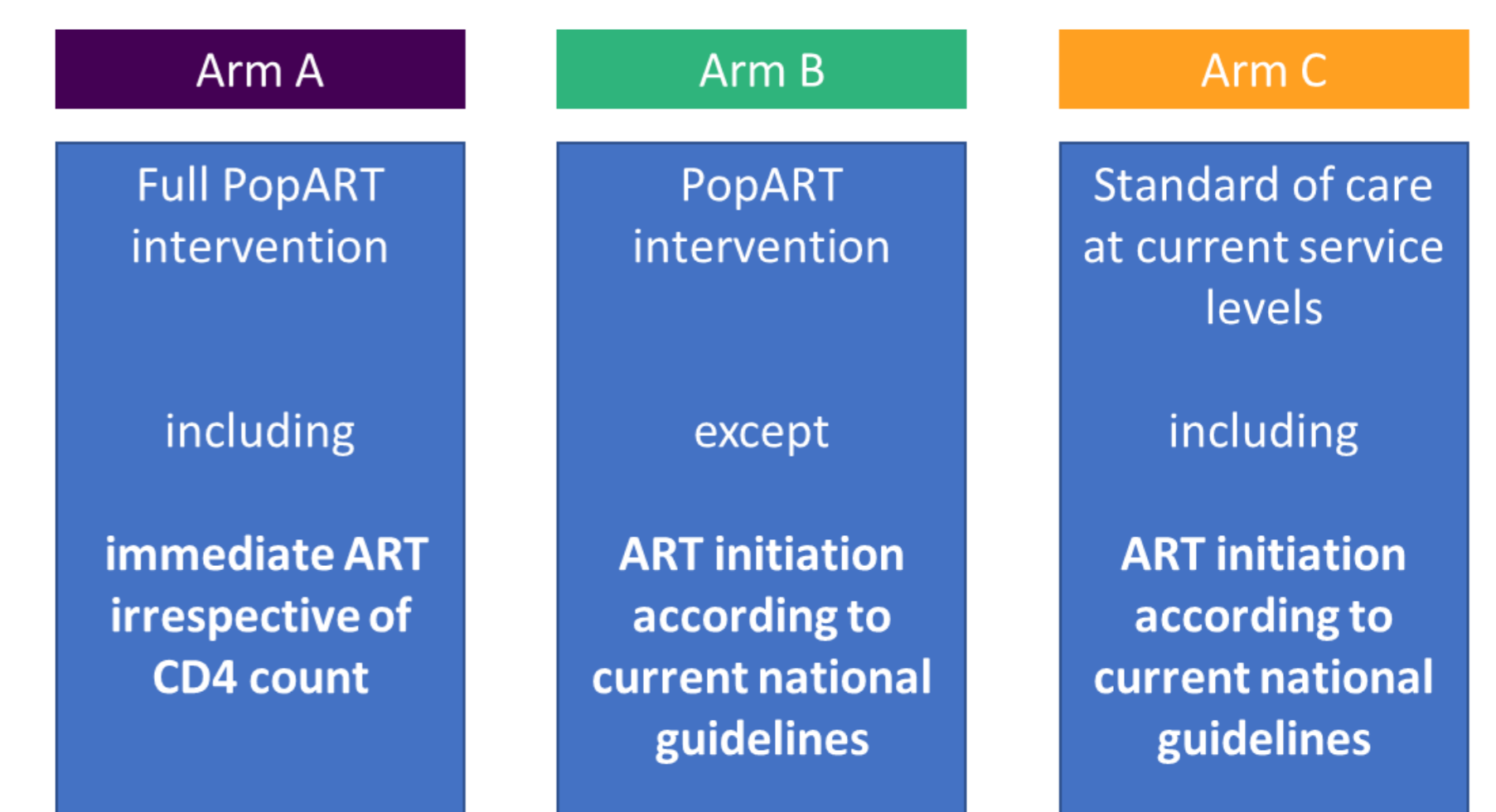


FIGURE 1. Design of the HPTN 071 (PopART) study.

Universal testing and treatment was not associated with a change in overall health-related quality of life among people living with HIV over 36 months



RESULTS

- At baseline, 7,856 people living with HIV were enrolled and provided HRQoL data, of whom 84.4% were women (Table 1).
- The mean HRQoL score was 0.886 (95% confidence interval: 0.884-0.888) in Arm A, 0.884 (0.882-0.886) in Arm B and 0.881 (0.879-0.884) in Arm C at the start of the trial.
- At 36 months, the mean HRQoL score was 0.893 (95% confidence interval: 0.891-0.894) in Arm A, 0.888 (0.886-0.890) in Arm B and 0.891 (0.889-0.892) in Arm C.
- There was no evidence of a difference in HRQoL scores between arms (adjusted mean difference, A vs C: 0.003, -0.001-0.006; B vs C: -0.004, -0.014-0.005, Fig. 2).
- However, the geometric mean prevalence of problems with pain or discomfort was 2.4% in Arm A, 7.5% in Arm B and 7.8% in Arm C, with prevalence lower in Arm A than C (adjusted prevalence ratio: 0.37, 0.14-0.97, Fig. 3).
- There was no evidence of a difference in effect between men and women for HRQoL scores or problems with pain or discomfort.

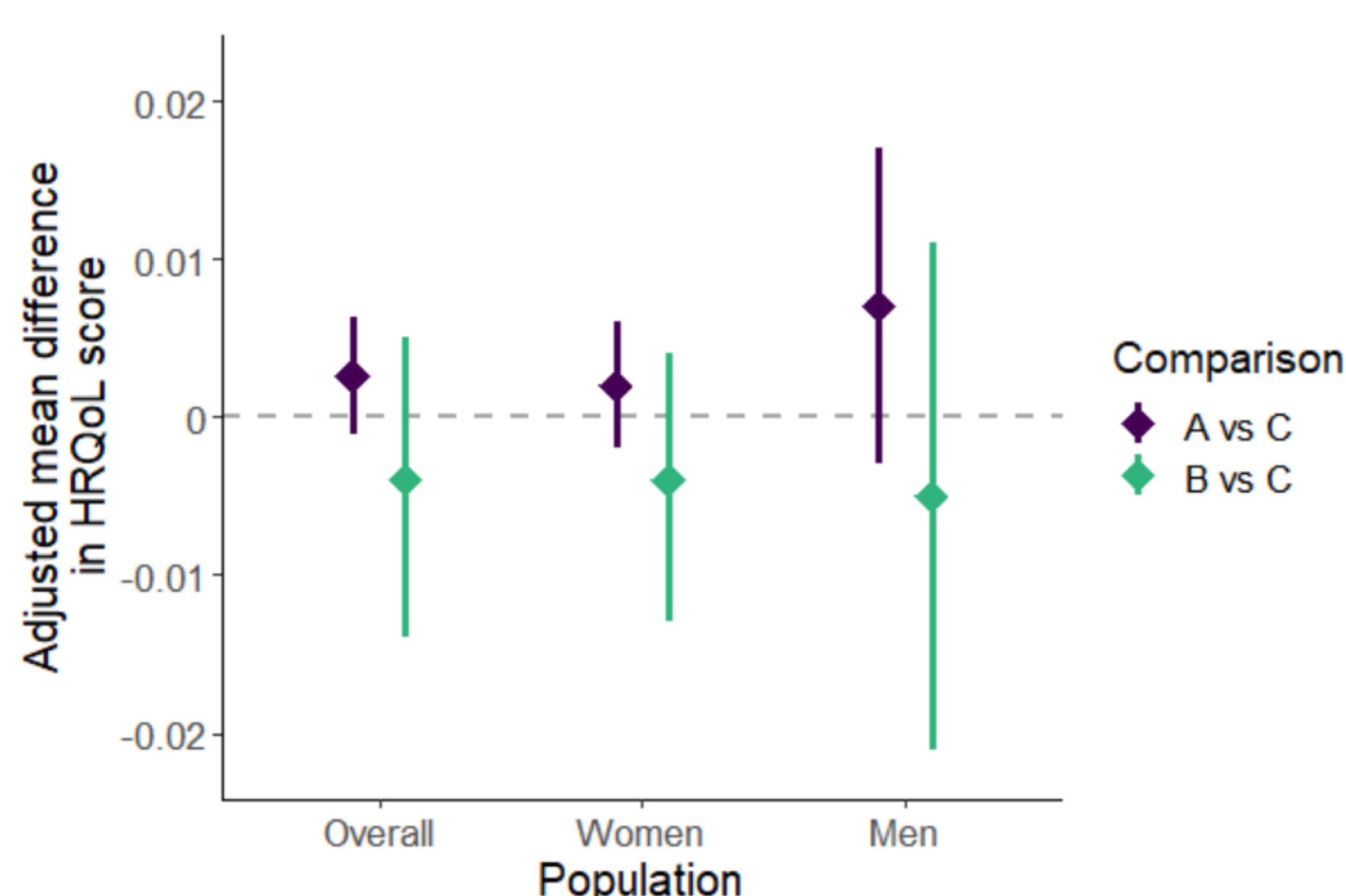


FIGURE 2. Adjusted estimates of the mean difference in HRQoL score between the arms at 36 months. Error bars: 95% confidence intervals.

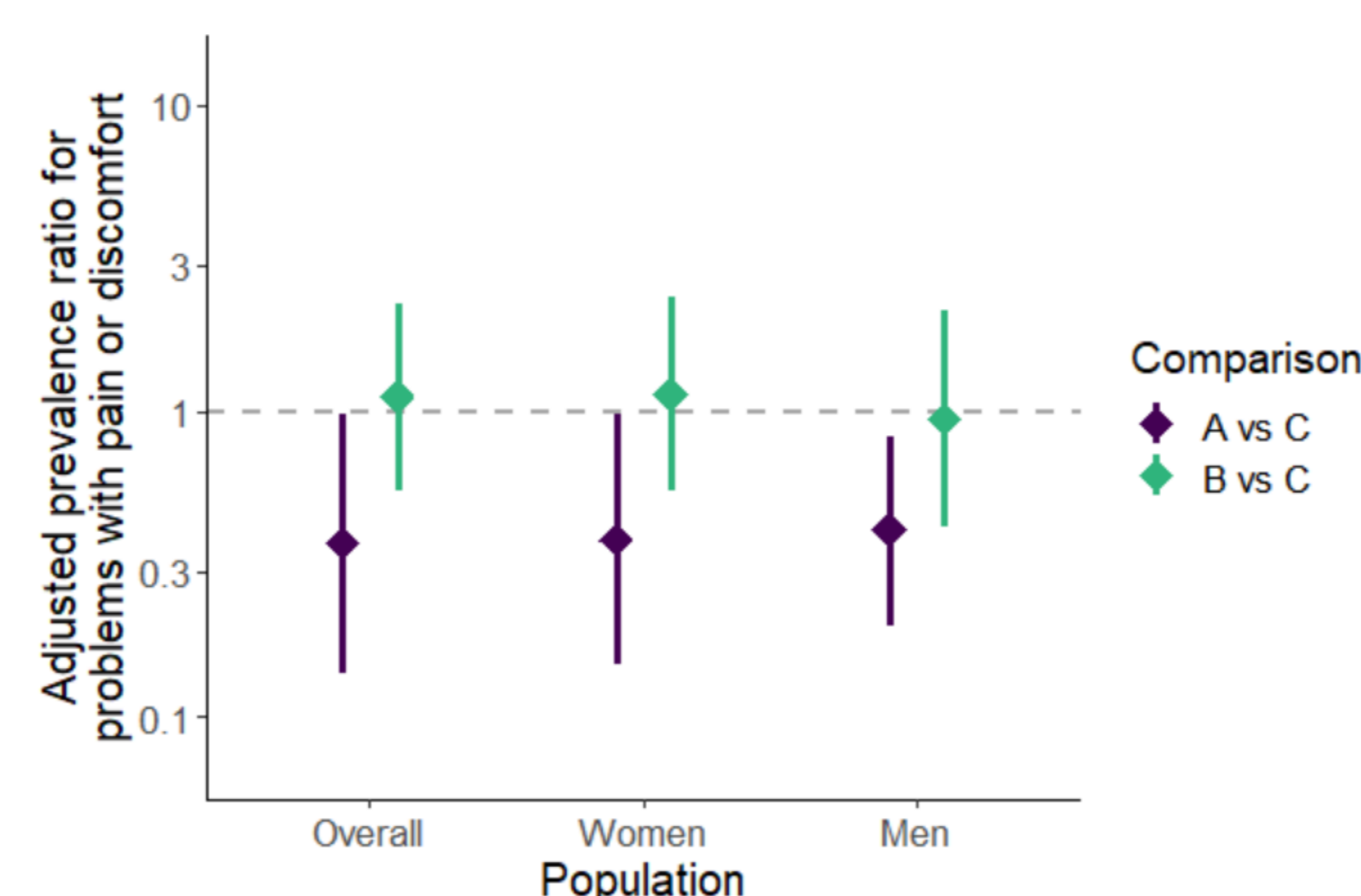


FIGURE 3. Adjusted estimates of prevalence ratios for problems with pain or discomfort at 36 months. Ratios less than one indicate fewer problems under the intervention. A log scale is used. Error bars: 95% confidence intervals.

TABLE 1. Baseline characteristics.

	Arm A (n=2,534)	Arm B (n=2,703)	Arm C (n=2,619)
Gender: female	2,131 (84.1%)	2,300 (85.1%)	2,200 (84.0%)
Mean age (years)	31	31	31
Mean health-related quality of life score	0.886	0.884	0.881
Mobility: reports any problems walking around	65 (2.6%)	78 (2.9%)	102 (3.9%)
Self-care: reports any problems washing and dressing	52 (2.1%)	82 (3.0%)	87 (3.3%)
Daily activities: reports any problems doing daily activities	97 (3.8%)	115 (4.3%)	123 (4.7%)
Pain or discomfort: reports any problems with pain or discomfort	230 (9.1%)	296 (11.0%)	323 (12.3%)
Anxiety or depression: reports any problems with anxiety or depression	235 (9.3%)	226 (8.4%)	189 (7.2%)

CONCLUSIONS

- There was no evidence that the HPTN 071 (PopART) UTT intervention changed overall HRQoL.
- This may be due, in part, to the relatively high HRQoL scores among people living with HIV at baseline, which left limited scope for large improvements. Consequently, it might be suggested that resources for raising HRQoL should be focused on other settings with greater potential for increases in HRQoL.
- However, our result also highlights that, in this setting, further improving HRQoL among people living with HIV will require more than enhanced access to testing and treatment. While UTT can reduce HIV incidence and ART can increase longevity, some remaining barriers to high HRQoL, such as experiences of HIV-related stigma, may not have been affected by the HPTN 071 (PopART) intervention. Investment in these areas could boost HRQoL.
- Finally, people living with HIV had fewer problems with pain or discomfort in Arm A than Arm C, but there was no evidence of a difference in pain or discomfort between Arm B and Arm C. The disparity between Arm A and Arm B may reflect the longer time, on average, that people living with HIV had been on ART in Arm A. In any case, this benefit of UTT should be maximised as roll-out continues.

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