

# Impact of a community-level combination HIV prevention intervention on knowledge of HIV status amongst adolescents: Primary results of HPTN 071 (PopART) for Youth Study

\*Kwame Shanaube<sup>1</sup>, \*Ab Schaap<sup>1,2</sup>, Joseph Mwate Chaila<sup>5</sup>, Graeme Hodinott<sup>4</sup>, Constance Mubekapi-Musadaidzwa<sup>4</sup>, Sian Floyd<sup>2</sup>, Peter Bock<sup>4</sup>, Richard Hayes<sup>2</sup>, Sarah Fidler<sup>3</sup>, Helen Ayles<sup>1,2</sup> on behalf of the HPTN 071 (PopART) Study Team.

\*Joint first authors

1.Zambart, Lusaka, Zambia 2. London School of Hygiene and Tropical Medicine, London, UK 3. Imperial college, London, UK 4.Desmond Tutu TB Centre, Department of Pediatrics and Child Health, Stellenbosch University, Cape Town, South Africa 5.Centre for Infectious Disease Research in Zambia

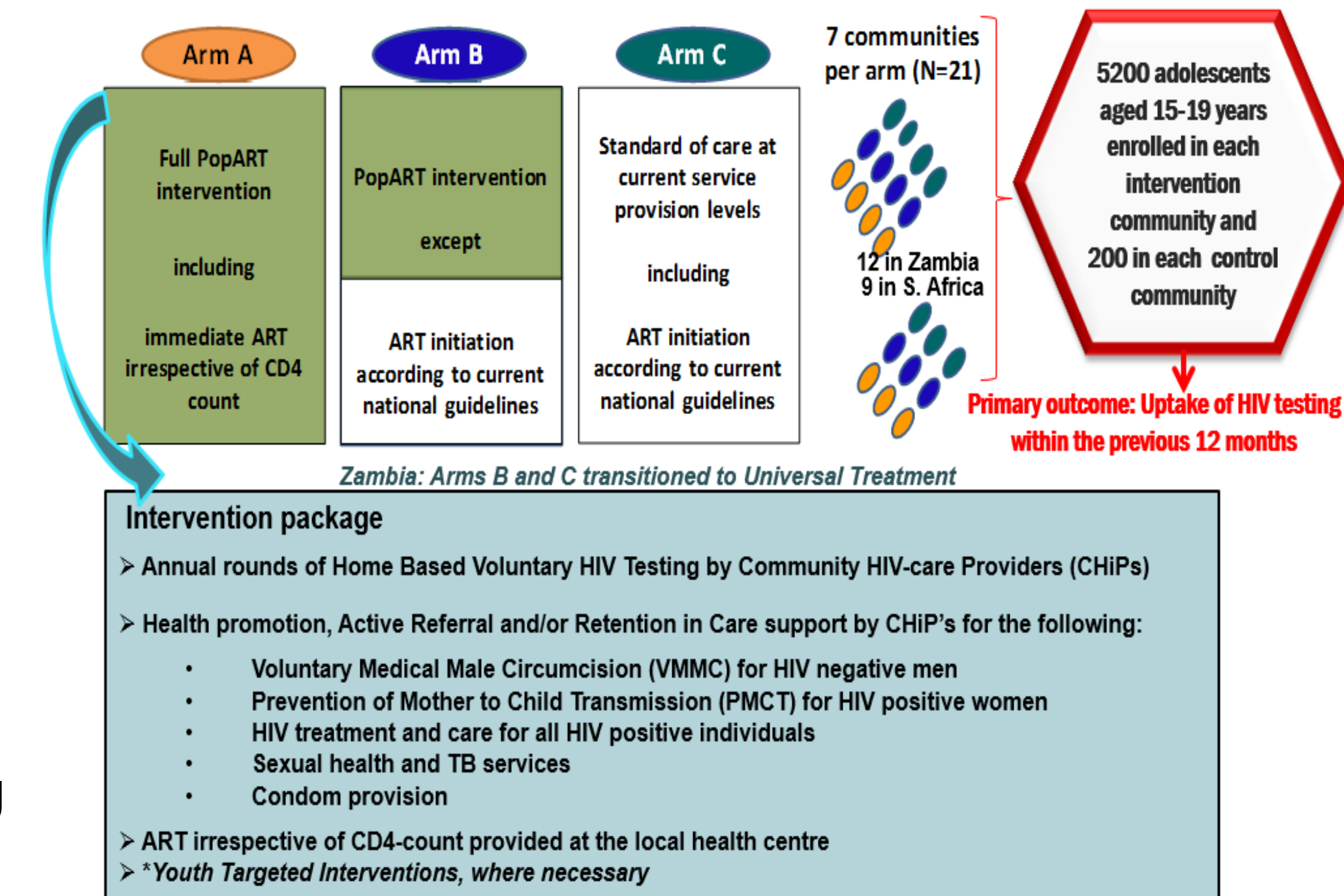


Figure 1: PopART Study Design

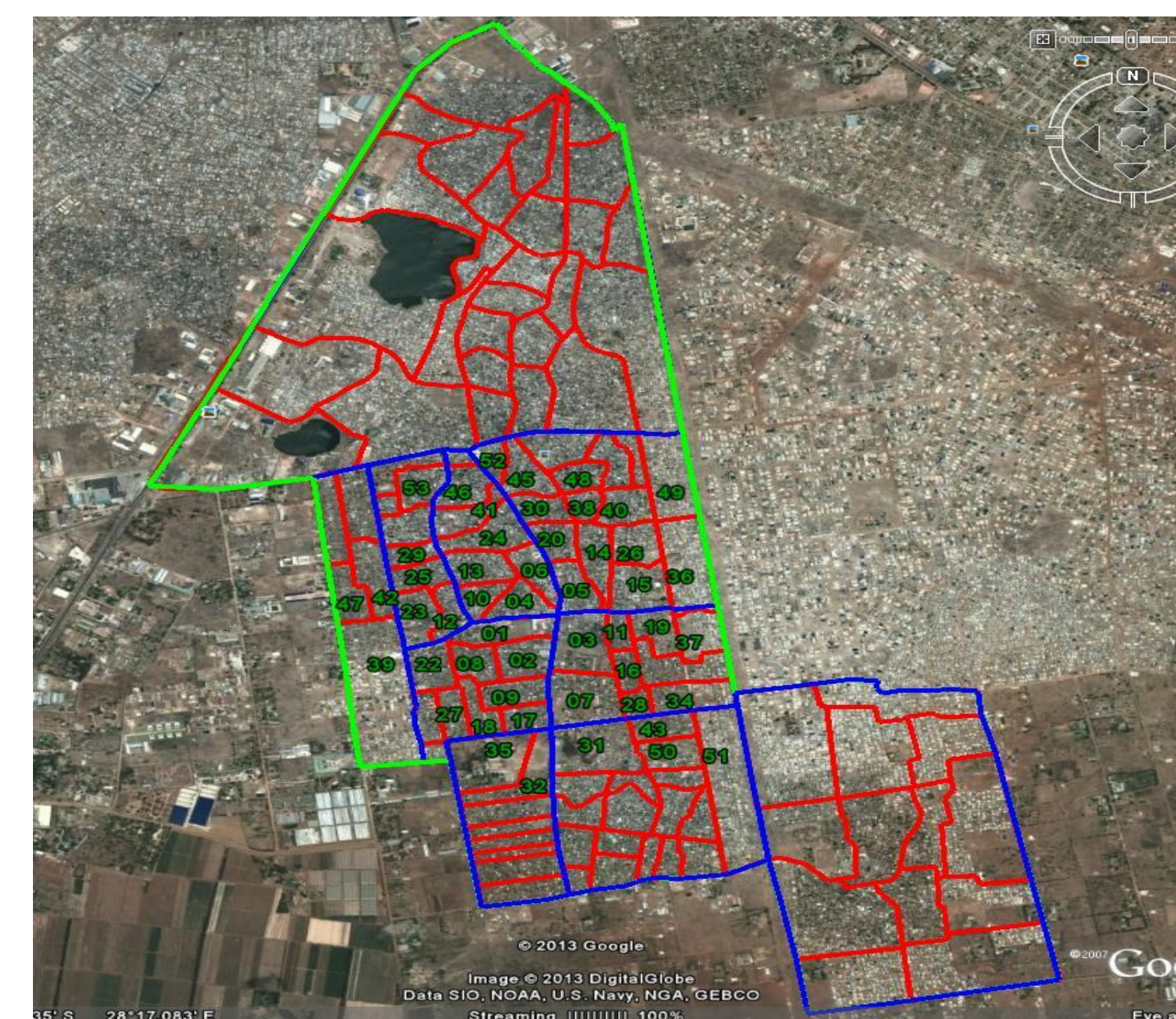
## INTRODUCTION

The HPTN 071 (PopART) for Youth (P-ART-Y) study evaluated the acceptability and uptake of the PopART community-level combination HIV prevention intervention (including universal HIV testing and treatment) among young people in Zambia and South Africa (SA). We assessed the impact of a package of a community-level combination HIV prevention approach on knowledge of HIV status, amongst adolescents aged 15-19 years.

## The proportion of adolescents 15-19 years that knew their HIV-status increased from 32.9% to 77.2%



Figure 2: Map showing geographical basis for sampling



## METHODS

The P-ART-Y study was nested within HPTN 071 (PopART), a 3-arm, cluster-randomized trial in 21 communities testing the impact on the PopART intervention (Arms A and B) compared with standard-of-care (Arm C). The study design is shown in figure 1. The PopART intervention was delivered over 4 years from November 2013 to December 2017. The P-ART-Y study was implemented from October 2015 to December 2017. The primary outcome was knowledge of HIV status (defined as self-reported HIV-positive status or being tested for HIV in the past 12 months). For Arms A and B communities, CHiPs electronic logbooks were used to record knowledge of HIV-status. For Arm C, data were collected from a cross-sectional survey of approximately 200-400 randomly-selected adolescents aged 15-19 in each community. The survey was done from August to November 2017. Random sampling was achieved by sampling all households within geographical “blocks” selected in random order to recruit all individuals aged 15-19 living in the sampled households (Figure 2).

## ANALYSIS

Community-level summaries of knowledge of HIV-status were calculated. We used linear regression with knowledge of status per community as dependent variable and arm as independent variable adjusted for triplet to get an estimate of the difference in the knowledge of HIV-status among trial arms.

## RESULTS

Overall, knowledge of HIV-status was 77.2% (23,218/30,089) in Arm A and 74.7% (24,018/32,148) in Arm B compared to 32.9% (698/2,120) in Arm C. Knowledge of HIV status varied by triplet, sex, and age (Figures 3 and 4). The intervention increased knowledge of HIV-status by 41.6% comparing Arm A with Arm C, (95%CI 28.1-55.2,  $p < 0.001$ ) and 39.6% comparing Arm B with Arm C, (95%CI 24.5-54.7,  $p < 0.001$ ). (table 1). The increase in knowledge of status was greater in Zambia (app. 50%) than in SA (app. 30%).

Figure 3: Knowledge of HIV-status comparing PopART intervention and control arms in Zambia and South Africa

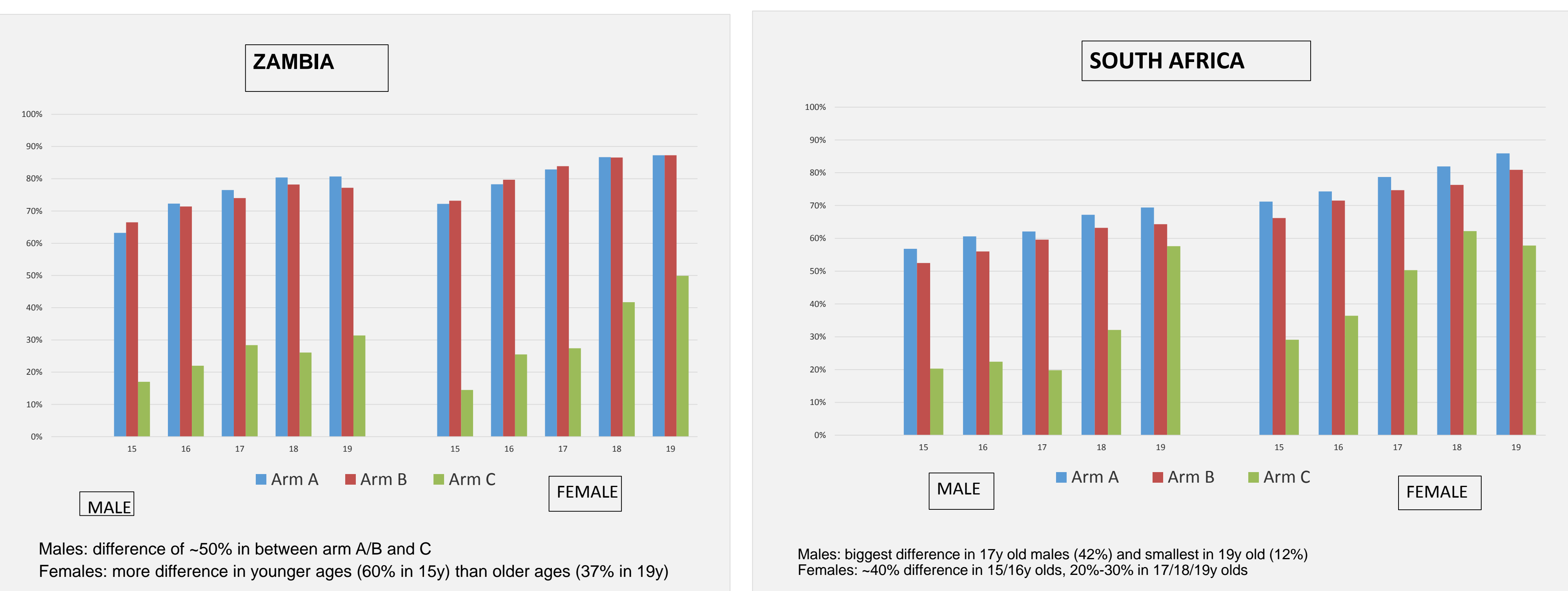


Figure 4: Distribution of community summaries of knowledge of HIV-status (all 21 communities, adjusted analysis)

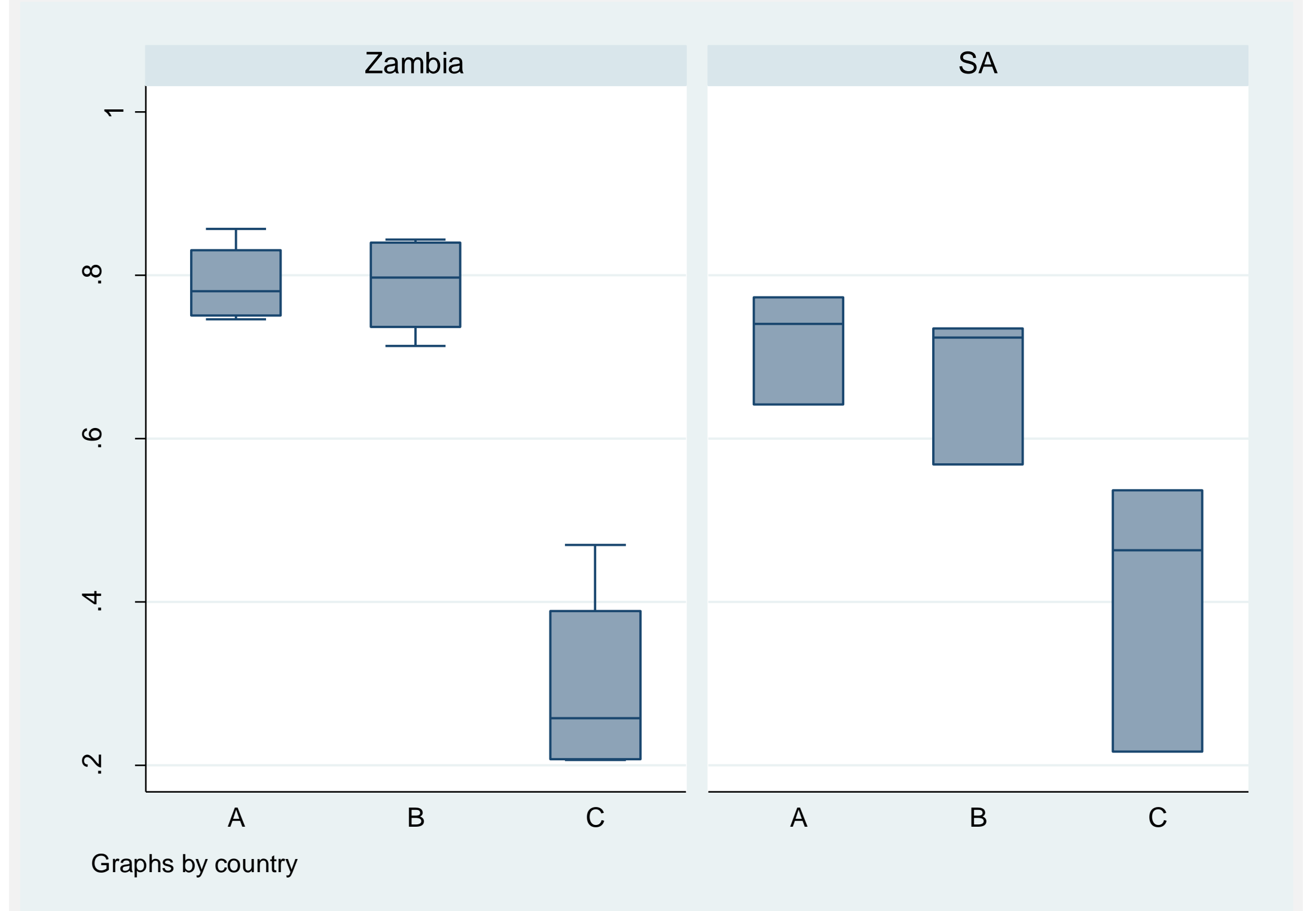


Table 1: Differences in knowledge of HIV status between study arms, overall and by country

	Difference in % of 15-19y olds that know their HIV-status	95% confidence interval	P value
Compare arm A with arm C	41.6%	28.1 – 55.2	<0.001
Compare arm B with arm C	39.6%	24.5 – 54.7	<0.001
<b>Zambia</b>			
Compare arm A with arm C	49.3%	28.1 – 70.6	0.005
Compare arm B with arm C	49.0%	25.7 – 72.4	0.007
<b>SA</b>			
Compare arm A with arm C	31.3%	6.6 – 56.0	0.032
Compare arm B with arm C	27.0%	7.8 – 46.2	0.026

## CONCLUSION

A community-level combination HIV prevention intervention, including universal test and treat had a big impact on knowledge of HIV status in adolescents. However we observed differences by sex, age, country, and community.

## ACKNOWLEDGMENTS

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