

Effects of financial incentives for clinic attendance on economic well-being among adults initiating antiretroviral therapy in Tanzania: a three-arm randomized controlled trial

Carolyn A. Fahey,^{1,2} Prosper F. Njau,³ Emmanuel Katabaro,⁴ Yudas Ndungile,³ Sandra I. McCoy¹

1 University of California, Berkeley, USA; 2 University of Washington, USA; 3 Ministry of Health, Tanzania; 4 Health for a Prosperous Nation, Tanzania

BACKGROUND

- Financial incentives for clinic attendance are shown to promote retention in care and antiretroviral therapy (ART) adherence.^{1,2}
- However, few randomized studies have assessed potential secondary impacts of these incentives on economic well-being.
- We examined the effects of different incentive sizes on wealth, employment, and food insecurity among adults (≥18 years) starting ART (within ≤30 days at enrollment) in Tanzania.

METHODS

- We conducted a three-arm parallel-group randomized controlled trial at four clinics in Shinyanga region, Tanzania.²
- In 2018, we enrolled and randomized 530 participants (Table).
- Participants were individually allocated (1:1:1) to usual care (control group) or to additionally receive a monthly cash incentive for up to 6 months, conditional on clinic attendance, in one of two amounts: 10000 or 22500 TZS (US \$4.50 or \$10).
- Economic outcomes were collected via a questionnaire at baseline and 6 months: wealth index (principal components analysis³), currently working, functional limitation (missed work due to illness), and food insecurity (Household Hunger Scale⁴).
- We compared changes in economic outcomes over 6 months using longitudinal regression models with a group-by-time interaction term, including multiple imputation for missing 6-month surveys (10.6%).

Financial incentives for clinic attendance may have additional benefits for economic well-being.

KEY FINDINGS

- From baseline to 6 months, overall improvements were observed in the proportions of those working (from 60% to 72%) and experiencing household hunger (from 27% to 21%), with little difference between study groups (Figure 1; Figure 2).
- Compared to the control group, the larger incentive group had a greater decline in functional limitation (-10.9 percentage points, 95% CI: -24.4, 2.6; p=0.118) and improved wealth percentile (3.8, 95% CI: -1.0, 8.6; p=0.121), while the smaller incentive group did not show notable relative improvements.

CONCLUSIONS

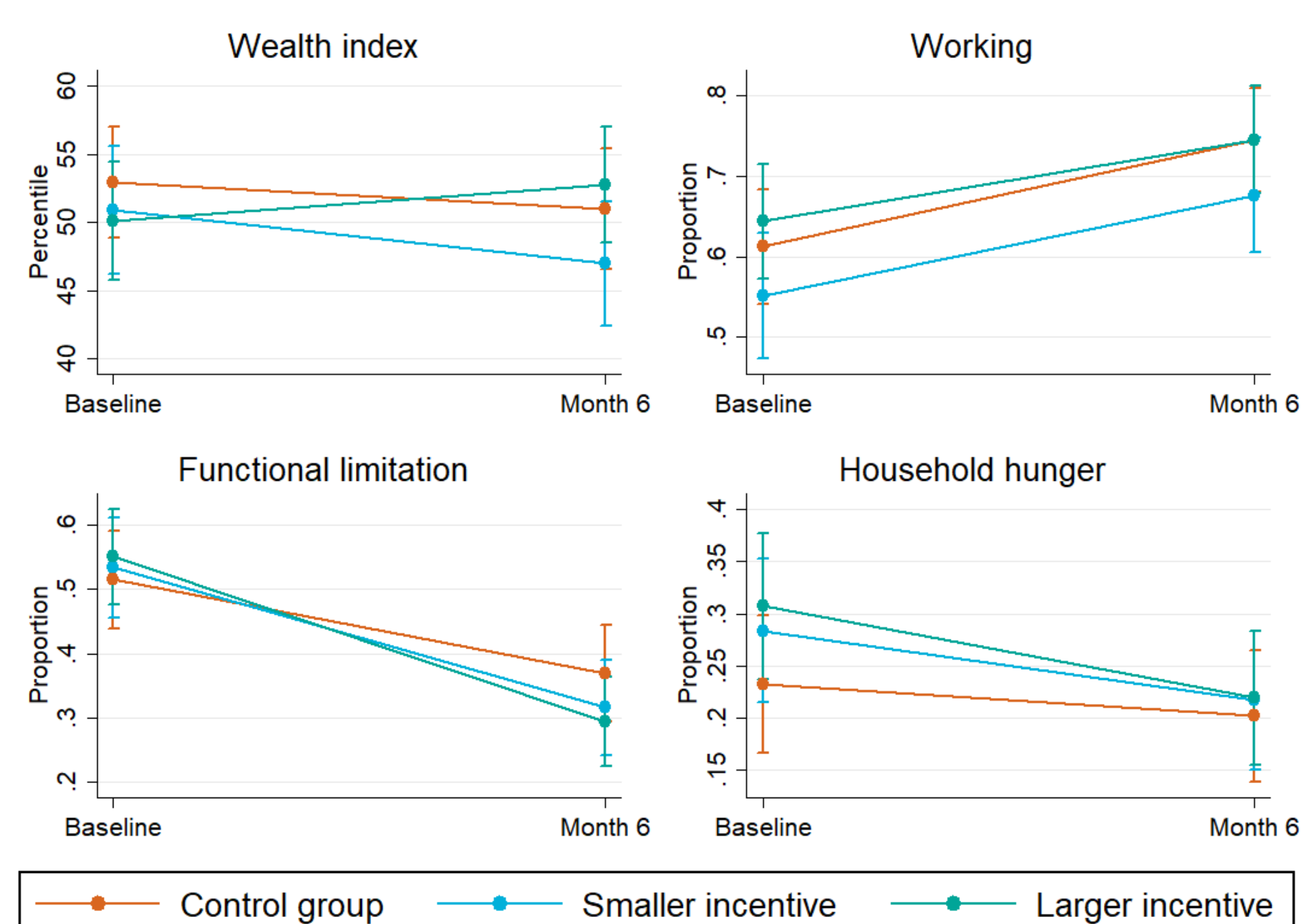
- Financial incentives to improve retention and ART adherence may have additional benefits for individual and household economic well-being, given a sufficiently large incentive size.
- These findings contribute further evidence for implementing incentives within HIV care and should be factored into cost-benefit considerations.

RESULTS

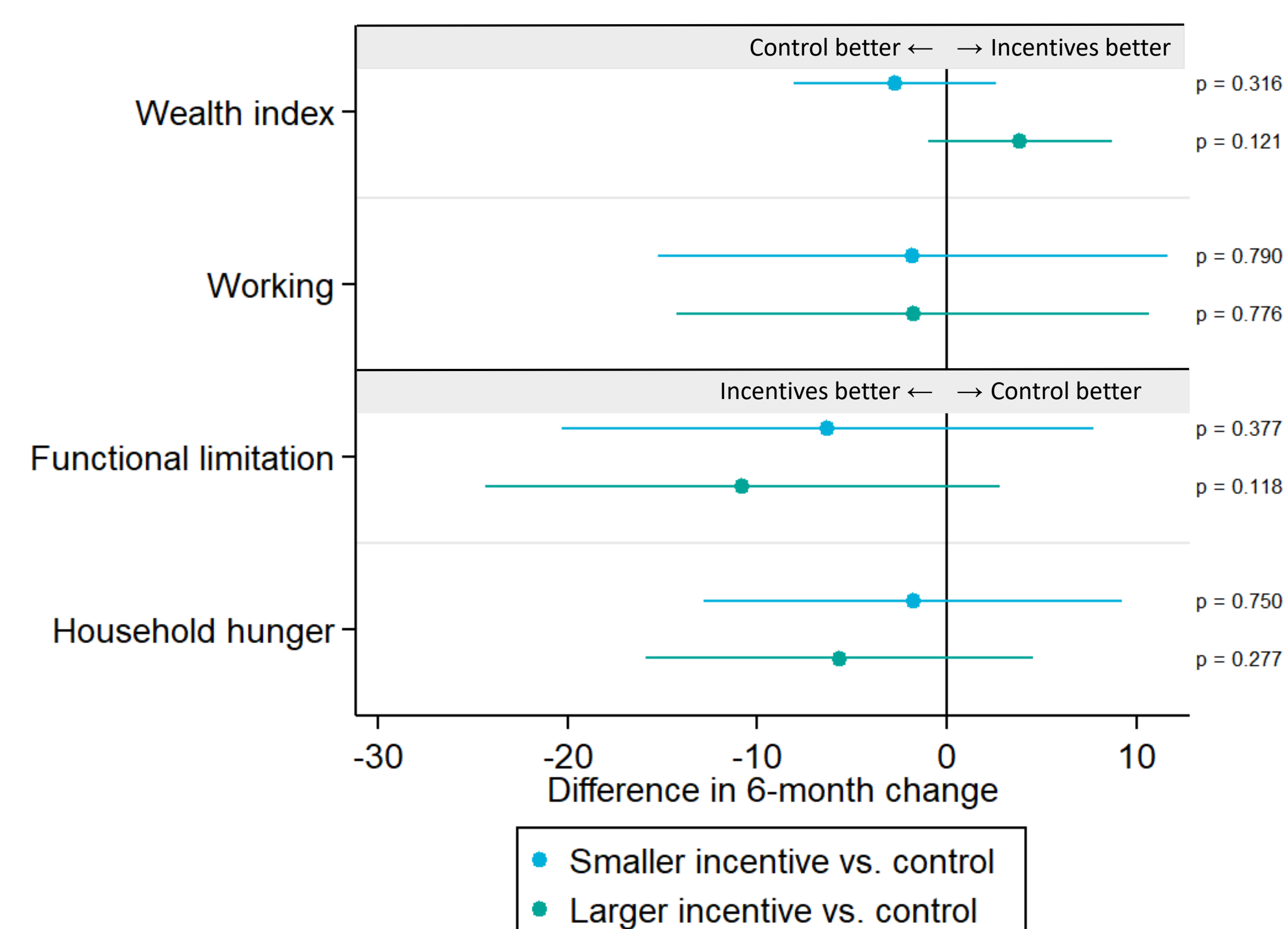
1 TABLE. Baseline characteristics, ART initiates in Tanzania, 2018

Characteristics	All (n=530)	Randomization Group		
		Control (n=184)	Smaller incentive (n=172)	Larger incentive (n=174)
Age in years, median (IQR)	35 (28–42)	35 (28–43)	36 (29–41)	34 (28–42)
Female	330 (62%)	116 (63%)	109 (63%)	105 (60%)
Married or partnered	288 (54%)	100 (54%)	93 (54%)	95 (55%)
Completed primary school	331 (62%)	118 (64%)	102 (59%)	111 (64%)
Primarily speaks Swahili	44 (46%)	75 (41%)	88 (51%)	81 (47%)
Health facility				
A. Referral hospital	42 (8%)	14 (8%)	14 (8%)	14 (8%)
B. District hospital	326 (62%)	114 (62%)	106 (62%)	106 (61%)
C. Health center	79 (15%)	27 (15%)	25 (15%)	27 (16%)
D. Dispensary	83 (16%)	29 (16%)	27 (16%)	27 (16%)
Days on ART, mean (SD)	10.6 (7.0)	10.3 (6.9)	10.0 (7.2)	11.4 (6.7)
WHO Clinical Stage 1 or 2	468 (88%)	160 (87%)	154 (90%)	154 (89%)

2 FIGURE 1. Six-month changes in economic well-being by group



3 FIGURE 2. Difference in 6-month changes in economic well-being comparing incentive groups to the control group



REFERENCES

- McCoy et al., 2017
- Fahey et al., 2020
- Rutstein et al., 2004
- Ballard et al., 2011

ACKNOWLEDGEMENTS

We are grateful to the local research team, clinic staff, and participants.
Funding: NIH/NIMH R01MH112432

CONTACT

Carolyn Fahey, PhD MPH
faheyc@uw.edu

