

# Conditional food and cash transfers do not increase purchase of temptation goods among adults living with HIV infection in Shinyanga, Tanzania



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## BACKGROUND

- Conditional in-kind and food incentives are increasingly recognized as effective tools for increasing demand for HIV care and treatment services amongst people living with HIV infection (PLHIV).
- We conducted a randomized trial in which PLHIV were assigned to standard of care (SOC) services or cash or food incentives. The primary evaluation found that both short-term cash incentives and food assistance decreased LTFU and increased the likelihood of achieving  $\geq 95\%$  medication possession ratio.
- However, a common concern is that incentives may increase expenditures on 'temptation goods' like alcohol and commercial sex.<sup>1-4</sup>

## PROCEDURES

- 805 PLHIV initiating ART were randomized 3 groups: SOC services or cash or food incentives, which were provided up to 6 months and conditional on HIV clinic visit attendance (Figure).
- Eligible PLHIV were:  $\geq 18$  years, food insecure as determined by the Household Hunger Scale<sup>5</sup>, and initiated ART  $\leq 90$  days prior.
- The cash incentive was 22,500 Tanzanian Shillings/month (TZS, ~\$11 USD/month, \$66 maximum for the incentive period) per month. Market value of the food basket was equivalent to the cash incentive.
- Incentive recipients received a message at enrollment to use the cash/food as needed to improve health.

## RESULTS

### 1. Incentive Usage

- On average, participants reported receiving 5.75 cash incentives vs. 5.98 food baskets during the 6 month intervention period.
- On average, cash recipients reported spending less time (30.8 minutes vs. 47.8 minutes) and money (3843 TZS vs. 7821 TZS) retrieving their incentives than food recipients.
- Among food recipients, none reported selling the food, while almost all (99.1%) reported consuming the basket contents. Overall, 98.8% cash recipients reported using the cash to purchase staple foods.
- Less than 20% of cash recipients reported using some of the cash for non-food purchases, like for non-staple foods (19.3%), non-food goods (15.4%), healthcare (9.5%), or education (3.2%).

### 2. Temptation Good Usage

- At baseline, 26 (3.3%) participants reported alcohol consumption in the last 30 days, which did not significantly differ across groups. At 6 months, there was a significant difference in the frequency of alcohol consumption between cash (0.3%) and food (3.9%) groups, Table), although it was very low overall.
- One (0.5%) participant reported using incentive cash to purchase alcohol, and no (0%) participants reported using cash/selling food for purchase of commercial sex.

## CONCLUSIONS

- Participants largely reported using incentives in the manner in which they were intended: to increase food consumption to improve health.
- There was no evidence of increased usage of or expenditures on temptation goods.
- These data confirm evidence from other contexts that the ultra-poor like the population under investigation, do not 'misuse' cash provisions<sup>2,6</sup> and that programs directly providing cash warrant further investment.

## FIGURE: Description of cash and food assistance.

The cash transfer was 22,500 TZS/month and distributed via mobile money services (M-PESA). The market value of the monthly food basket was equivalently valued to the cash and contained 12kg maize flour, 3kg beans, and 3kg groundnuts and was available for pick-up on 2 days per month at an unmarked distribution center near each health facility.



## OUTCOMES

1. **Incentive Usage:** Mean number of incentives received, resources (i.e., time and costs incurred) retrieving incentives, and reported incentive usage and frequency of usage
2. **Temptation Good Usage:** We compared use of and expenditures on temptation goods by arm, including: alcohol consumption at baseline (ever and within the last 30 days) and at 6 months (within the last 30 days), and purchase of alcohol or commercial sex (with cash directly or through selling basket contents).
3. **Expenditure Patterns:** Using a difference-in-differences model, we examined changes in: 1) mean per-capita food expenditures in TZS from baseline to 6 months in cash and food groups compared with the SOC, 2) in 30 day transportation expenditures from baseline to 6 months, and 3) non-food items and education expenditures within the last 12 months.

**TABLE 1: Self-reported alcohol usage amongst standard of care (SOC) and cash/food groups at baseline and 6 months.**

	Study Group			Cash vs. Food p-value <sup>b</sup>	SOC vs. Cash p-value <sup>b</sup>	SOC vs. Food p-value <sup>b</sup>
	SOC only n (%; 95% CI)	SOC+Cash n (%; 95% CI)	SOC+Food n (%; 95% CI)			
<b>Alcohol Consumption</b>						
Ever consumed alcohol (baseline)	50 (45.1%, 35.7, 54.4)	160 (46.4%, 41.1, 51.6)	177 (51.9%, 46.6, 57.2)	0.44	1.00	0.62
Alcohol consumption last 30 days (baseline)	5 (4.5%, 0.6, 8.4)	12 (3.5%, 1.5, 5.4)	9 (2.6%, 0.9, 4.3)	1.00	1.00	1.00
Alcohol consumption last 30 days (6 months) <sup>a</sup>	3 (2.1%, -2.0, 6.1)	1 (0.3%, -0.3, 0.9)	11 (3.9%, 1.4, 6.4)	0.02	1.00	1.00

a. Percentages are inverse probability weighted for missing 6-month surveys and surveys completed  $\geq 11$  months after baseline visit (n=312; 39%). Variables used in the missingness model, which were covariates identified a priori as being likely predictors of missingness and those with  $p < 0.05$  in bivariate analyses, included: sex, age, WHO clinical stage, language, asset score, clinic of randomization, being nomadic, and unemployment.

b. p-values generated by making pairwise comparisons of the three groups using a Wald test, corrected for multiple comparisons using the Bonferroni adjustment.

### 3. Expenditure Patterns

The differences-in-differences analysis revealed:

- A non-significant increase of 328 TZS/month in per-capita food expenditures for cash recipients (95% CI, -8361 to 9018;  $p_{DID} = 0.94$ ).
- A decline of 2335 TZS/month in per-capita food expenditures for food recipients (95% CI, -10908 to 6239;  $p_{DID} = 0.59$ ).
- No statistically significant changes in expenditures from baseline to 6 months within groups for transport in the last 30 days, non-food items, or education within the last 12 months.

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