

# SHORT-TERM CASH AND FOOD ASSISTANCE

## Evidence-Based Structural Intervention

## Evidence-Based for Retention in Care

## Good Evidence for Medication Adherence

### INTERVENTION DESCRIPTION

#### Goal of Intervention

- Improve retention in HIV care
- Improve ART adherence

#### Target Population

- People living with HIV (PLHIV) who are food insecure and recently initiated antiretroviral treatment (ART)

#### Brief Description

*Short-Term Cash and Food Assistance* is an intervention that provides short-term food or cash assistance for food insecure PLHIV in Tanzania who recently initiated ART. Participants receive nutrition assessment and counseling (NAC), plus the opportunity to receive a monthly cash transfer or food basket for up to 6 consecutive months, conditional on attending scheduled visits with the HIV care provider. Cash transfers are valued at 22,500 Tanzanian Shillings (approximately \$11 USD dollars, \$66 maximum during intervention period) and are transferred via mobile money services or are given to participants directly if they have no access to a mobile phone. Food baskets are also valued at approximately \$11, and included whole maize meal, groundnuts, and beans.

#### Theoretical Basis

None reported

#### Intervention Duration

- Receipt of monthly cash transfers or food baskets for up to 6 consecutive months

#### Intervention Setting

- HIV primary care facilities (two hospitals and one peri-urban clinic)

#### Deliverer

- HIV care provider

#### Delivery Methods

- Cash and food incentives

#### Structural Components

- Social Determinants of Health – Survival
  - Provided cash transfers or food baskets for up to 6 consecutive months, conditional on attending scheduled visits with the HIV care provider

## INTERVENTION PACKAGE INFORMATION

**An intervention package is not available at this time.** Please contact **Sandra McCoy**, Division of Epidemiology, School of Public Health, University of California, 2121 Berkeley Way West, MC 7360, Berkeley, CA 94720.

Email: [smccoy@berkeley.edu](mailto:smccoy@berkeley.edu) for details on intervention materials.

## EVALUATION STUDY AND RESULTS

### Study Location Information

The original evaluation was conducted in Shinyanga, Tanzania between December 2, 2013 and August 17, 2016.

### Key Intervention Effects

- Increased retention in HIV care
- Improved medication adherence

### Recruitment Settings

Two hospitals and one peri-urban clinic

### Eligibility Criteria

PLHIV were eligible if they were at least 18 years of age; newly initiated on ART within 90 days or less; and were food insecure, as measured with the Household Hunger Scale (score of  $\geq 2$ ). Moderately malnourished PLHIV (BMI 16-18.5kg/m<sup>2</sup>) were determined to be eligible for inclusion given the frequency of moderate malnutrition among ART initiates and the lack of any special nutritional or clinical services for this group at study sites.

### Study Sample

The baseline study sample 800 men and women is characterized by the following:

- *64% Female, 36% Male*
- *Median age of 35 years; interquartile interval 29-43 years*
- *Median body mass index (BMI) of 21.0 kg/m<sup>2</sup>*

### Assignment Method

Participants were individually randomized to 1 of 3 study arms: NAC and Cash Transfers (n = 347), NAC and Food Baskets (n = 345), or NAC-only comparison (n = 113).

### Comparison

Participants in the comparison group received the standard HIV primary care services, including NAC.

### Relevant Outcomes Measured

- Medication adherence was measured at 6 and 12 months post-initiation of intervention, and assessed as the proportion of patients with medication possession ratio (MPR, or the proportion of days in a specific interval

that an individual has possession of at least one ART dose). MPR was measured using cutoffs of 95% and 80%, as well as on a continuous scale.

- Retention in HIV care was measured as:
  - Appointment attendance, defined as the proportion of scheduled visits completed at 6 and 12 months
  - Lost to follow-up, meaning no evidence of HIV primary care visits at least 90 days since last scheduled visit at 6 and 12 months

### Participant Retention

Because participant retention is not a criterion for the Structural Interventions chapter, the Prevention Research Synthesis project does not evaluate that information.

### Significant Findings on Relevant Outcomes

#### ***NAC and Cash Transfers intervention vs NAC-only comparison***

- A significantly greater proportion of NAC and Cash Transfers intervention participants achieved MPR  $\geq$  95% adherence than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = 21.6%, 95% CI= 9.8—33.4,  $p<0.01$ ; adjusted difference = 23.5%, 95% CI= 12.2—34.7,  $p<0.01$ ), and 12 months post-initiation of intervention (unadjusted difference = 19.5%, 95% CI= 6.9—32.1,  $p<0.01$ ; adjusted difference = 20.3%, 95% CI= 8.4—32.2,  $p<0.01$ ).
- A significantly greater proportion of NAC and Cash Transfers intervention participants achieved MPR  $\geq$  80% adherence than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = 13.6%, 95% CI= 3.9—23.3,  $p<0.01$ ; adjusted difference = 15.2%, 95% CI= 6.2—24.3,  $p<0.01$ ).
- NAC and Cash Transfers intervention participants had significantly greater MPR adherence when measured on a continuous scale than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = 9.7%, 95% CI= 5.6—13.8,  $p<0.01$ ; adjusted difference = 10.5%, 95% CI= 6.5—14.4,  $p<0.01$ ), and at 12 months post-initiation of intervention (unadjusted difference = 9.7%, 95% CI= 4.9—14.5,  $p<0.01$ ; adjusted difference = 10.3%, 95% CI= 5.6—15.0,  $p<0.01$ ).
- NAC and Cash Transfers intervention participants had significantly improved retention in care, measured as appointment attendance, than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = 13.5%, 95% CI= 9.1—17.8,  $p<0.01$ ; adjusted difference = 13.9%, 95% CI= 9.5—18.3,  $p<0.01$ ) and at 12 months post-initiation of intervention (unadjusted difference = 11.3%, 95% CI= 7.2—15.5,  $p<0.01$ ; adjusted difference = 11.8%, 95% CI= 7.6—16.0,  $p<0.01$ ).
- NAC and Cash Transfers intervention participants had significantly improved retention in care, measured as lost to follow-up, than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = -10.0%, 95% CI= -17.3—-2.8,  $p<0.01$ ; adjusted difference = -10.3%, 95% CI= -17.7—-3.0,  $p<0.01$ ) and at 12 months post-initiation of intervention (unadjusted difference = -10.6%, 95% CI= -20.1—-1.1,  $p<0.05$ ; adjusted difference = -11.9%, 95% CI= -21.7—-2.0,  $p<0.05$ ).

#### ***NAC and Food Baskets intervention vs NAC-only comparison***

- A significantly greater proportion of NAC and Food Baskets intervention participants achieved MPR  $\geq$  95% adherence than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = 15.8%, 95% CI= 3.8—27.9,  $p<0.01$ ; adjusted difference = 17.0%, 95% CI= 5.5—28.5,  $p<0.01$ ).
- A significantly greater proportion of NAC and Food Baskets intervention participants achieved MPR  $\geq$  80% adherence than NAC-only comparison participants at 6 months post-initiation of intervention (adjusted difference = 9.4%, 95% CI= 0.1—18.8,  $p<0.05$ ).

- NAC and Food Baskets intervention participants had significantly greater MPR adherence when measured on a continuous scale than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = 7.5%, 95% CI= 3.4—11.6,  $p<0.01$ ; adjusted difference = 8.0%, 95% CI= 4.1—11.9,  $p<0.01$ ) and at 12 months post-initiation of intervention (unadjusted difference = 6.2%, 95% CI= 1.4—11.0,  $p<0.01$ ; adjusted difference = 6.6%, 95% CI= 1.9—11.3,  $p<0.01$ ).
- NAC and Food Baskets intervention participants had significantly improved retention in care, measured as appointment attendance, than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = 11.8%, 95% CI= 7.5—16.2,  $p<0.01$ ; adjusted difference = 12.2%, 95% CI= 7.8—16.6,  $p<0.01$ ) and at 12 months post-initiation of intervention (unadjusted difference = 8.9%, 95% CI= 4.7—13.1,  $p<0.01$ ; adjusted difference = 9.2%, 95% CI= 5.1—13.4,  $p<0.01$ ).
- NAC and Food Baskets intervention participants had significantly improved retention in care, measured as lost to follow-up, than NAC-only comparison participants at 6 months post-initiation of intervention (unadjusted difference = -9.4%, 95% CI= -16.7— -2.1,  $p<0.01$ ; adjusted difference = -9.6%, 95% CI= -17.0— -2.1,  $p<0.01$ ).

### Considerations

- Analyses were adjusted for site, WHO clinical stage, occupation, and language.
- This intervention is also considered evidence-based for the Medication Adherence (MA) and the Linkage to, Retention in and Re-engagement in HIV Care (LRC) Chapters of the PRS Compendium.

### *Non-significant effects on relevant outcomes:*

- There was no statistically significant effects between the NAC and Cash Transfers intervention arm and NAC-only comparison arm for MPR $\geq$  80% adherence at 12 months post-initiation of intervention (unadjusted difference = 8.1, 95% CI= -1.6—17.7; adjusted difference = 8.5, 95% CI= -1.0—18.0).
- There were no statistically significant effects between the NAC and Food Baskets intervention arm and NAC-only comparison arm for:
  - MPR $\geq$  80% adherence at 6 months post-initiation of intervention (unadjusted analyses only) (unadjusted difference = 8.3, 95% CI= -1.8—18.3)
  - MPR $\geq$  95% adherence at 12 months post-initiation of intervention (unadjusted difference = 8.7, 95% CI= -4.2—21.5; adjusted difference = 9.5, 95% CI= -2.6—21.7)
  - MPR $\geq$  80% adherence at 12 months post-initiation of intervention (unadjusted difference = 2.4, 95% CI= -7.7—38.1; adjusted difference = 2.5, 95% CI= -7.3—38.4)
  - Retention in care, measured as lost to follow-up, at 12 months post-initiation of intervention (unadjusted difference = -7.6, 95% CI= -17.4—2.1; adjusted difference = -8.5, 95% CI= -18.6—1.7)

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## REFERENCES AND CONTACT INFORMATION

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