

LOTTO TO LINK (CONDITIONAL LOTTERY INCENTIVE STRATEGIES)

Evidence-Based Structural Intervention

INTERVENTION DESCRIPTION

Intended Population

- Men with HIV (MWH)

Goals of Intervention

- Improve linkage to HIV care
- Improve antiretroviral therapy (ART) initiation
- Improve viral suppression

Brief Description

Lotto to Link is an individual-level structural intervention with a conditional lottery incentive. Participants in intervention and comparison groups receive, during an initial in-person visit, an optimized ART linkage package, including a referral card and two-way text messages to support linkage to ART. In the first 3 months, all participants receive neutral, encouraging health promotional text messages with a number to text if additional help is needed. Participants in the intervention group only receive an additional immediate text message after visiting the clinic that provides information about entry into a lottery if they complete the next step in the HIV care continuum. One week later, another text message is sent to the intervention participants indicating the lottery result (win or not) and promoting additional opportunities to win the lottery. Lottery eligibility is conditional on clinical registration, ART initiation, completing ART monitoring and refill visits, and viral suppression at six months. Lottery prizes are either a mobile phone, data, or a gift card (all valued at South African Rand 1000/\$100 US Dollars at the time of the study implementation). Staff provides information to the intervention group when a lottery is won and what prize is chosen.

Theoretical Basis

- Behavioral economics theory

Intervention Duration

- One in-person initial session followed by text messages at week 1 and months 1, 2, and 3

Deliverers

- Study staff

Intervention Settings

- HIV clinic
- Mobile phone

Delivery Methods

- Mobile phone – text messages

Structural Components

- Access – HIV testing
 - Increased access to linkage to HIV medical care and to antiretroviral therapy (ART)
- Social Determinants of Health – Survival
 - Gift cards offered as lottery prize option

INTERVENTION PACKAGE INFORMATION

An intervention package is not available at this time. Please contact **Ruanne V. Barnabas**, Division of Infectious Diseases, Massachusetts General Hospital, 55 Fruit Street, Boston, MA 02114.

Email: rbarnabas@mgh.harvard.edu for details on intervention materials.

EVALUATION STUDY AND RESULTS

Study Location Information

The original evaluation study was conducted in KwaZulu-Natal, South Africa between November 2017 and December 2018.

Key Intervention Effects

- Decreased median time to ART initiation

Study Sample

The baseline characteristics for the total study sample of (N = 131) men included:

- 100% male persons
- 11% persons aged 18 to 24 years, 12% persons aged 25 to 29 years, 69% persons aged 30 to 49 years, 8% persons aged 50 years or older
- 14% persons with a primary education level, 81% persons with a secondary education level, 5% persons with a tertiary education level and above
- 56% persons with baseline viral load <20, 11% persons with baseline viral load 20 to 999, 14% persons with baseline viral load 1,000 to 9,999, 19% persons with baseline viral load 10,000 or higher

Note: Percentages may not add up to 100% due to rounding.

Recruitment Settings

- Community-based HIV testing and counseling (HTC) at home, mobile HTC (testing from mobile vans), and clinics that provide HIV prevention and treatment according to national South African guidelines.

Eligibility Criteria

Men residing in the study community aged 18 or older with a positive test for HIV using the national rapid HIV antibody testing algorithm were eligible if they were not currently on ART and had access to confidential text messaging. MWH were eligible regardless of whether they were newly diagnosed or if they were not currently taking ART.

Assignment Method

Eligible participants (MWH) (N = 131) were randomly assigned (1:1) to receive the conditional lottery incentive with motivational text message support for linking to care (intervention, n = 56) or motivational text messages only (control, n = 75). The randomization sequence was predetermined and available through the staff mobile phone app for each participant enrolled. The randomization allocation was not revealed to staff or the participant until all screening procedures were completed, and eligibility was confirmed. The study was unblinded; however, the laboratory staff, who assessed the primary outcome of plasma HIV viral load, were blinded to the allocation of participants as were the study investigators.

Comparison

Participants in the control group of motivational text messages only (n = 75) received an optimized ART linkage package, including a clinic referral card and two-way text messages to support linkage to ART. At months 1, 2, and 3, participants received a neutral, encouraging text message, for example, “Make good decisions for your health today!” with a number to text if they needed additional help.

Relevant Outcomes Measured

- ART initiation was assessed by study staff recording the reason for the clinic visit and verification in the clinic chart
- Time to ART initiation was measured in days
- Viral suppression was defined as viral load below the assay limit of detection (<20 copies/mL).

Participant Retention

Participant retention was not reported and is not a criterion for the Structural Interventions Chapter.

Significant Findings on Relevant Outcomes

- Lottery incentives decreased median time to ART initiation to 66 days from 126 days (adjusted Hazard Ratio (adjHR) = 1.77, 95% Confidence Interval [95% CI]: 1.20-2.61, p = 0.0043). *
 - Among participants who had detectable viral load at baseline (n = 58), lottery incentives decreased median time to ART initiation to 20 days from 134 days (adjHR = 2.27, 95% CI: 1.24-4.14, p = 0.0077). *

Considerations

Additional significant positive findings on non-relevant outcomes

- None reported

Non-significant findings on relevant outcomes

- Lottery incentives had no significant effect on clinic registration (adjusted Relative Risk [adjRR]* = 1.21, 95% CI: 0.83-1.76)**
- Lottery incentives had no significant effect on ART initiation by six months (adjRR* = 1.23, 95% CI: 0.84-1.79)**
- Lottery incentives had no significant effect on viral suppression at six months (adjRR* = 1.13, 95% CI: 0.73-1.75)**

Negative findings

- None reported

Other related findings

- In planned subgroup analysis, men with detectable viral load at baseline were more likely to register at the clinic ([adjHR]** = 1.25, 95% 0.71 to 2.22), although not statistically significant due to small sample size
- In planned subgroup analysis, men with detectable viral load at baseline were more likely to initiate ART (adjHR** = 1.30, 95% CI 0.73 to 2.32), although not statistically significant due to small sample size
- In planned subgroup analysis, men with detectable viral load at baseline were more likely to become virally suppressed (adjHR** = 1.35, 95% 0.60 to 3.06), although not statistically significant due to small sample size

Implementation research-related findings

- None reported

Process/study execution findings

- None reported

Adverse events

- None reported

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*Adjusted for age less than 30 years

**Adjusted for age

REFERENCES AND CONTACT INFORMATION

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