

## Using Behavioural Science in Text Messages to Improve Retention in Care among PLHIV in Ekurhuleni District, South Africa

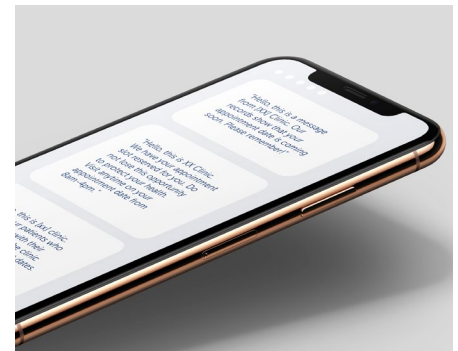
There is a need to increase sustained engagement in HIV care to achieve the therapeutic and prevention benefits of antiretroviral therapy (ART).

### BACKGROUND

Over 30% of people living with HIV (PLHIV) in South Africa are not taking antiretroviral therapy (ART), including those who are not taking ART consistently or have never initiated on ART. Care recipients who miss clinic appointments often do not return to care. This leads to worse health outcomes and increases the risk of continued HIV transmission.

In South Africa and other countries, text messages are often used to remind care recipients about their scheduled clinic appointments and contact those who miss their appointments. Despite some evidence to support the use of text messages, there is little information on how best to frame these messages to achieve the biggest impact.

Text message reminders grounded in behavioural science principles may motivate care recipients to attend clinic appointments on time. In partnership with the Aurum Institute, *Indlela* re-designed the content of routine appointment reminders to prompt care recipients to attend their upcoming visits.



### STUDY OVERVIEW

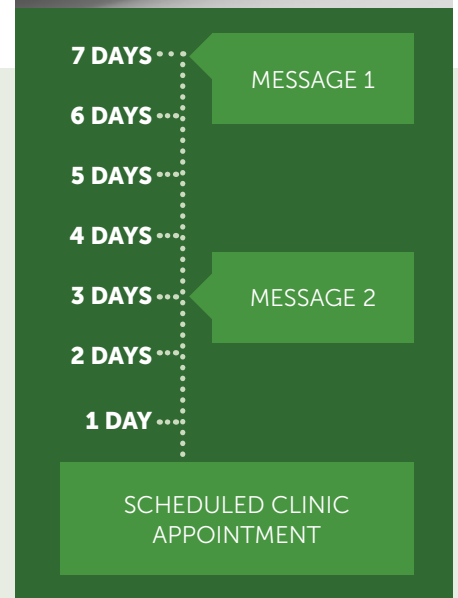
**Objective:** Determine whether text messages that used behavioural economics principles increase timely clinic attendance among HIV care recipients.

**Location:** The study took place at 3 public sector clinics where HIV care delivery was supported by The Aurum Institute in Ekurhuleni District, Gauteng Province.

**Population:** Adults living with HIV with an upcoming ART clinic appointment.

**Study design & intervention:** ART recipients were randomised to receive a standard of care appointment reminder or one of the three different reminders leveraging behavioural economics principles. Reminder messages were sent 7 days and 3 days in advance of a clinic appointment.

**Outcome:** Verified clinic visit on the scheduled appointment day.



#### STANDARD OF CARE

You have an appointment next week.



#### LOSS AVERSION

We have your medication reserved for you.



#### SOCIAL NORMS

Most patients stay on track, you can too.



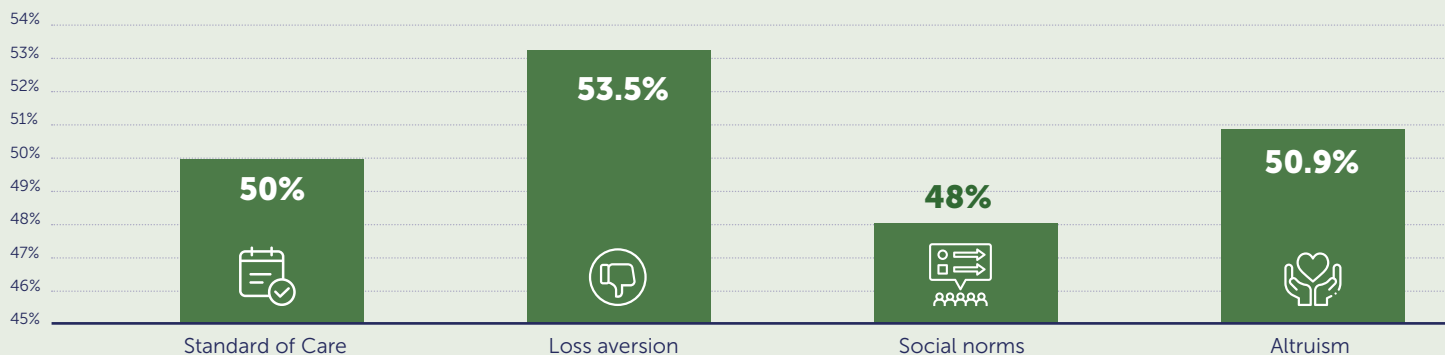
#### ALTRUISM

Protect your loved ones by staying on track.

### RESULTS

- Among 1,539 HIV care recipients who had an upcoming clinic appointment, 45% were male and the median time on ART was 11 months.
- Across all study groups nearly 50% of the HIV care recipients did not come to clinic on or before their appointment date.

Proportion of care recipients attending clinic visits on or before scheduled visits, by randomisation arm



- Clinic attendance was similar across study arms, with no evidence of differences between groups that received different messages
- A subgroup analysis showed that among care recipients on ART for less than 90 days, those who received the loss aversion message were 1.4 times more likely to attend their scheduled visit compared to the standard of care.
- Care recipients on ART for less than 6 months were more likely to attend scheduled visits, irrespective of the appointment reminder.

KEY FINDING 1	KEY FINDING 2	KEY FINDING 3	KEY FINDING 4
Overall, text messages that were designed using key behavioural economics concepts did not increase timely clinic attendance among HIV care recipients in South Africa.	Loss aversion framed messages may increase timely clinic visit attendance among care recipients who have been on treatment for less than 90 days.	The success of text message reminders is contingent on other structural and environmental factors such as contact number availability, ART dispensing practices, and the healthcare ecosystem.	More research should be done to understand care recipient acceptance of messages, the feasibility of 2-way messages, and the effects of different messages on different segments of the population.

POLICY RECOMMENDATIONS

Using behavioural economics insights to design text messages is a low-cost, easily scalable addition to case management of care recipients who are at risk of being lost to follow up.	An efficient clinic with a conducive environment may increase likelihood of success.
Although there was no significant difference in visit attendance by message across arms, loss aversion framed messaging may be useful to nudge care recipients into timely visit attendance, especially early on in their treatment journey.	Leveraging technology like two way text messages, mobile apps, or interactive voice response (IVR) can help increase engagement with hard-to-reach populations.
Tailoring messages to the care recipient is important for effective engagement.	Continued focus on encouraging timely appointment attendance is needed – as nearly 50% of care recipients miss their clinic appointments.