

SMS Reminders Improve Patients' Pharmacy Appointment-keeping for Antiretroviral Refills in Namibia

by Wezi Tjaronda, Harriet R. Kagoya, Samson Mwinga, Bayobuya Phulu, Greatjoy Mazibuko, and Evans Sagwa

Patients on lifelong antiretroviral therapy (ART), who may be at risk of forgetting their pharmacy appointments for antiretroviral (ARV) refills, may benefit from a cell phone-based short message service (SMS) that reminds them to pick up their medication.

The SMS-based ART pharmacy appointment and medication adherence reminder service provides automated text notifications to ART patients reminding them to pick up their ARV refills according to appointment dates made by pharmacy staff using the SIAPS-supported Electronic Dispensing Tool (EDT).

The service was introduced in May 2015 at 10 public-sector ART sites in 6 of Namibia's 14 regions. These sites were selected using routine reports on early warning indicators of poor patient adherence, retention, and on-time pill pick-up rates. The reports were based on an analysis of ARV dispensing data from the EDT at the selected sites.

The recommendation for an SMS reminder came out of the 2011 Namibia ART Baseline Adherence survey, which determined that some patients visited the pharmacy only after running out of their ARVs and missing doses. These missed doses could lead to treatment failure and the development of HIV resistance to ARVs. In the long run, this increases the number of patients dying from HIV.

The survey found that 67% of the interviewed patients attributed missing their doses to *"being preoccupied with something else"* or because *"my alarm/reminder was not near me"*.

Natania Likando* picks up her ARVs every two months from Okuryangava clinic in the Khomas region. She received her first SMS reminder in October 2015, shortly after the service was introduced.

"I am happy to receive the SMS because it reminds me to go to the pharmacy to pick up my medicines," Natania Likando said, adding that it is easy to forget an appointment, especially when she is busy.

An automated text message from the Ministry of Health and Social Services thanking the patient for subscribing to the SMS reminder service. Photo credit: SIAPS Namibia staff, September 2015.



“Before the SMS, I would still honor my appointments because I always check in the health passport. Now it is even easier because of the SMS that comes directly to my cell phone,” Seth Johannes said. “It is a good back-up system.”

Enrollment in the service is voluntary. The EDT sends an automated text message to enrolled patients the day before a pharmacy appointment, the morning of the appointment, and one day after any missed appointment. Natania said that she knows the importance of taking her medication every day, but she does forget. The SMS reminder jogs her memory by reminding her to refill her ARVs.

Seth Johannes* has also been receiving text messages on his cell phone. Seth said he is happy that there is a back-up system to the appointment date that is written in his health passport (prescription card).

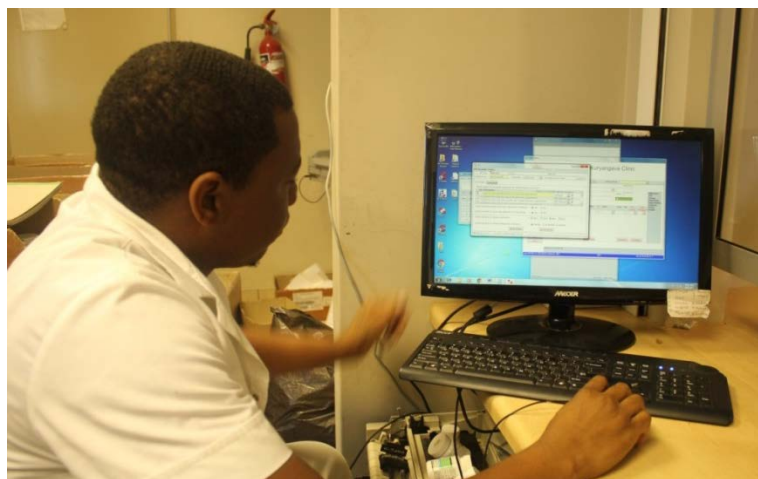
By September 2016, 8,147 of the 20,377 patients from 7 of the 10 sites had enrolled in the SMS reminder service. More than 8,400 SMS reminders were sent to patients on or before their appointment dates between October and December 2016. During the same period, 659 reminders were sent to patients who had missed a pharmacy appointment by up to nine days.

Messages are sent in the patient’s preferred language and there are six language options, including English. The reminders state: “Your health matters, don’t forget your appointment is today” and “Your health matters, you have missed your appointment”. The messages were written after extensive consultations with experts and patients on ART to ensure that confidentiality is maintained.

An analysis of the EDT database showed that after the SMS reminder was implemented, Okuryangava Clinic had a significant improvement in terms of on-time pill pick-up by ART patients. Of the 3,892 active ART patients at the clinic, 424 enrolled in the SMS reminder service. Between October and December 2016, 1,194 reminders were sent before and on the appointment date, while 67 were sent for missed appointments.

Fewer reminders after the appointment date than before or on the date indicate that most patients notified during this period kept their appointments. Between October and December 2016, the clinic recorded an on-time pick-up rate of 94.4%.

Mathew Sikume, the pharmacist at the Okuryangava ART pharmacy, has observed improvements in on-time pill pickups and appointment keeping but noted that it remains difficult to determine whether adherence increased after the implementation of the SMS reminders.



Mathew Sikume enters a patient’s appointment date on the SMS-based ART pharmacy appointment and adherence reminder system. Photo credit: SIAPS Namibia staff, March 2017.

“Not all patients are enrolled in the system and the only people on the program are the ones that started taking pills after the program was implemented,” said Mathew.

For patients who have disclosed their HIV status to their partners and families, the SMS reminder service is good and should continue, while those who have not have reservations about the service.

“You might not be the one with the phone at the time the reminder comes in and your partner or whoever picks up the phone might want to know what appointment it is,” said Herman Paulus*. He added that anything concerning his health was for him alone to know.

Mathew agreed with patients’ comments that the SMS reminder service is a good system that should continue because many patients need to be reminded to refill their ARV prescriptions.

“A good number of the patients cannot read, so even the dates inscribed in their health passports do not mean anything, while others lose their passports. These patients need to be reminded to come for their appointments, and this is where the SMS reminders become very useful, especially for patients whose partners know their status and can read messages for them,” added Mathew.

In addition to pill pick-up reminders, some patients want to receive other health-related messages, such as the types of food ART patients should eat and how they should take their medicines.

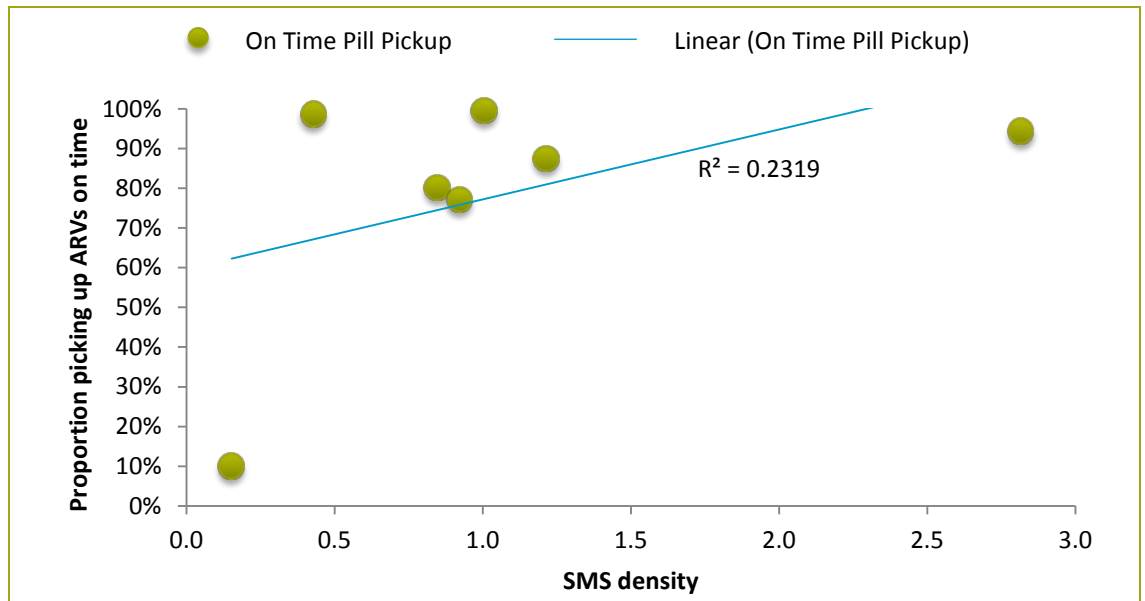


Figure 1. The correlation between SMS reminders and on-time pill pick-up

*Names have been changed to protect patients’ privacy.