Personalized Text Messages Could Boost HIV Medication Adherence

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A personalized text messaging reminder service significantly boosted antiretroviral (ARV) adherence over a six-week period compared with a standard beeper reminder system, according to a study published in the March issue of *AIDS Patient Care and STDs*. Though the authors acknowledge the small size of the study, they also indicate that the findings offer hope for the large number of people who struggle with adherence.

Though most modern ARV regimens are far more forgiving of missed doses than previous regimens, they still require that the vast majority of doses be taken on time, as prescribed, to avoid the development of HIV drug resistance and treatment failure. In fact, the No. 1 reason for most treatment failures is adherence trouble.

Numerous studies have found that forgetfulness is the most common reason given for missing doses. Though a recent systematic review of a variety of studies looking at electronic reminder devices failed to find an adherence boosting benefit, evolving technology now allows researchers to overcome the shortcomings of those devices.

Helene Hardy, PharmD, MSc, from Boston University Medical Center, and her colleagues hoped to overcome problems with previous reminder devices (people quickly learned to ignore the reminders) by developing two new ways of keeping study participants engaged. In one arm, people were given cell phones and got to choose from a range of information feeds—including jokes, Bible verses, current news or sports updates—that would arrive along with their medication reminder. Then, people were asked to respond via text-message to verify that they took their doses; if they failed to respond, the phone would continue beeping every 15 minutes until the participant sent a text message reply. The cell-phone arm was compared with a standard beeper-based reminder system, wherein a beeper sounds an alert at the time of the next scheduled dose.

The 19 study participants were predominantly drawn from two demographic groups that have shown the biggest challenges with adherence in multiple clinical trails: African Americans and people who contracted HIV through heterosexual contact.

During the study's six-week course, adherence by self-report and pill count increased significantly in the participants who received text messages by cell phone, but not in those who received reminders by beeper. What's more, in the cell phone arm, people's level of improved adherence

didn’t wane, as had frequently occurred in studies of older methods, such as beepers and phone calls.

The authors acknowledge that their study was small and of short duration. However, they plan to conduct longer follow-up studies and to pair the cell-phone reminder systems with health literacy training in hopes of further enhancing adherence improvements.

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