

5 | E-PILL BOTTLE REMINDER ALARMS

Category: Education and Treatment Adherence

Agency: Crossroads North

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Subpopulation: Youth

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Regional Group: Washington, D.C./Virginia

Evidence of Improvement: Yes **Other Data:** Yes

Intervention: Utilized pill bottle reminder alarms (e-pill) for patients new to the clinic or who did not have consistent medication routine.

Change Ideas:

- Clinic purchased pill bottle reminder devices with no cost to patient
- Provided instruction on use during clinic visits
- Determined the mode of communication with client along with dates or frequency of check in to monitor clients' progress or troubleshoot any problems

Intervention Description:

There is some evidence that shows that medication reminder devices improve HIV medication adherence and biomarker outcomes.^{1,2} This e-pill bottle reminder intervention served as medication reminders among youth ages 13-24 years who were new to Crossroads North or who had ineffective medication routine. These medication reminder devices (TimeCap) were provided to youth which were coupled with Gilead's 2-minute "Help Stop the Virus" video as a treatment adherence teach-back tool. Instructions were provided during clinic visits on how to use the device as well as the device features. Clinic staff also showed the patients how to set the alarm to their preferred time and addressed any concerns or questions they had. Mode of communication along with dates or frequency of check-in to monitor patients' progress were established. Seven patients reached viral suppression using the devices while two patients with the devices are currently out of care after they reached viral suppression. Patients expressed that they found the "day/time" indicator which showed when the bottle was last opened, to be more useful than using the alarm only. Viral suppression among youth increased from 53.3% (8/15) to 69.2% (9/13) for this intervention between July 2018 and December 2019.

¹ Spratt ES, Papa CE, Mueller M, Patel S, Killeen T, Maher E et al. Using Technology to Improve Adherence to HIV Medications in Transitional Age Youth: Research Reviewed, Methods Tried, Lessons Learned. *Journal of General Medicine*. 2017. 1(1).

² Haberer JE, Robbins GK, Ybarra M, Monk A, Ragland K, Weiser SD et al. Real-time electronic adherence monitoring is feasible, comparable to unannounced pill counts, and acceptable. *AIDS and Behavior*. 2012. 16(2): 375–382.

<p><i>Do you have measurable data to demonstrate the effectiveness of this intervention?</i></p> <p>Yes</p>	<p><i>How effective was this intervention to increase viral suppression or reduce HIV disparities? (Scale from 1-4)</i></p> <p>3-Effective</p>	<p><i>What are the start and end data points for the intervention to indicate the measurable impact?</i></p> <p>N/A</p>	<p><i>Was this intervention tested/implemented during the Collaborative?</i></p> <p>Yes</p>
<p><i>Is this intervention replicable across other HIV subpopulations of the Collaborative?</i></p> <p>Yes</p>	<p><i>How do you rate the ease of replication of the intervention by other HIV providers? (Scale from 1-4)</i></p> <p>4-Very Easy to Replicate</p>	<p><i>How much financial support do you estimate was necessary to test your intervention per patient? (\$-No Additional Agency Costs; \$\$-1 to 49 US Dollars; \$\$\$-50-99 US Dollars or more; \$\$\$-100 or more US Dollars; Don't Know)</i></p> <p>\$\$</p>	