

Rx Adherence Monitors Do Work... Mostly

— Not all could record time of opening, however, in controlled lab experiments

by Nicole Lou, Contributing Writer, MedPage Today
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Most commercially-available electronic adherence monitoring devices do in fact capture whether patients adhere to their drug regimens, researchers confirmed in an independent analysis.

Seven out of ten devices accurately registered at least 24 of 25 device openings -- a proxy for a person taking a pill -- when investigators led by Meghan McGrady, PhD, of Cincinnati Children's Hospital Medical Center and University of Cincinnati College of Medicine, tested them in a controlled lab setting.

Each reading of the monitoring device was deemed accurate only if the recorded time of opening was accurate within 120 seconds, McGrady's group described in a brief research report published online in *Annals of Internal Medicine*.

Moreover, these devices were tested under conditions simulating four adherence patterns to a drug that is supposed to be taken twice daily for 21 days: perfect adherence, non-adherence by the patient taking additional doses, non-adherence by the patient missing doses, and non-use.

The seven devices that were confirmed to register openings accurately were the eCAP 1-Clic, eCAP Argus-Loc, MEMS SmartCap, MEMS TrackCap, MedMinder Maya, MedSignals Pill Case/Monitor, and SimpleMed+.

The remaining three devices either did not work, did not record time of opening, or did not record it accurately.

"Selecting an EAMD with features that align with patient characteristics may increase patient [acceptability and uptake](#)," McGrady and colleagues said.

"In addition, clinicians and researchers should consider the degree to which electronic adherence monitoring device features are consistent with the patients' geographic location (for example, electronic adherence monitoring devices requiring cellular connectivity may not function in areas with limited service), the degree to which electronic adherence monitoring device features are consistent with the clinical or research goal of electronic adherence monitoring device use (for example, efforts to passively monitor adherence may preclude the use of electronic adherence monitoring devices with reminders), and their budget."

Disclosures

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Source Reference: [McGrady ME, et al "An independent evaluation of the accuracy and usability of electronic adherence monitoring devices" Ann Intern Med 2018; DOI: 10.7326/M17-3306.](#)