Most diabetes phone apps lack education, support functions

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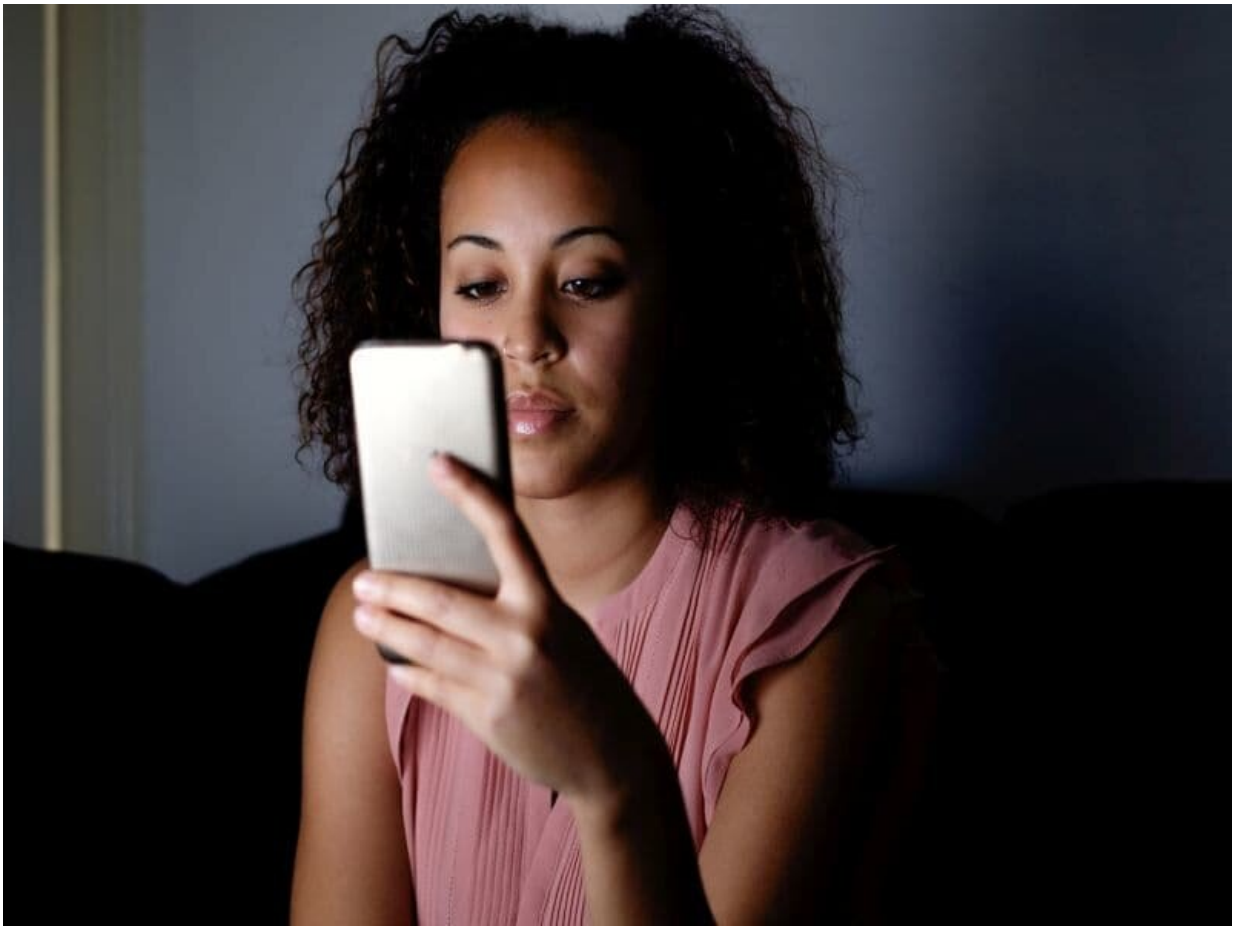

(HealthDay)—Most diabetes apps miss opportunities to improve care

and health outcomes by not providing real-time decision support or situation-specific education on blood glucose self-management, according to a research letter published in the April 16 issue of the *Journal of the American Medical Association*.

Elaine Lum, Ph.D., from the Nanyang Technological University in Singapore, and colleagues searched the apps database 42Matters using the terms diabetes, blood glucose, and blood sugar on Dec. 7, 2018. Apps (free, "freemium," and for pay) updated at least once in the previous 17 months (a proxy for app maintenance and user support) were screened, downloaded, and assessed for evidence-based criteria derived from diabetes management guidelines.

The researchers found that 371 (198 Android; 173 iOS) of 5,184 potential apps met inclusion criteria and were downloaded. All apps recorded blood glucose levels. Reminders to measure blood glucose were present in 27.8 percent of apps, and hemoglobin A1c recording was present in 28.6 percent. Users were alerted to hypoglycemia in 58.8 percent of apps and were alerted to hyperglycemia in 58.4 percent through an explicit message, action prompt, or color change. A message explicitly alerting users to hypoglycemia or hyperglycemia was displayed in 37.0 and 32.4 percent of apps, respectively, and was accompanied by an action prompt in 20.7 percent for hypoglycemia and 15.3 percent for hyperglycemia. The same alert was triggered for consecutive out-of-range values within a 24-hour period in 86.6 and 88.9 percent of apps for hypoglycemia and hyperglycemia, respectively.

"Quality assurance mechanisms such as certification of apps are needed to help achieve their potential of supporting diabetes care," the authors write.

More information: Abstract/Full Text (subscription or payment may be required)