Electronic alerts improve long-term uptake of lipid lowering medication

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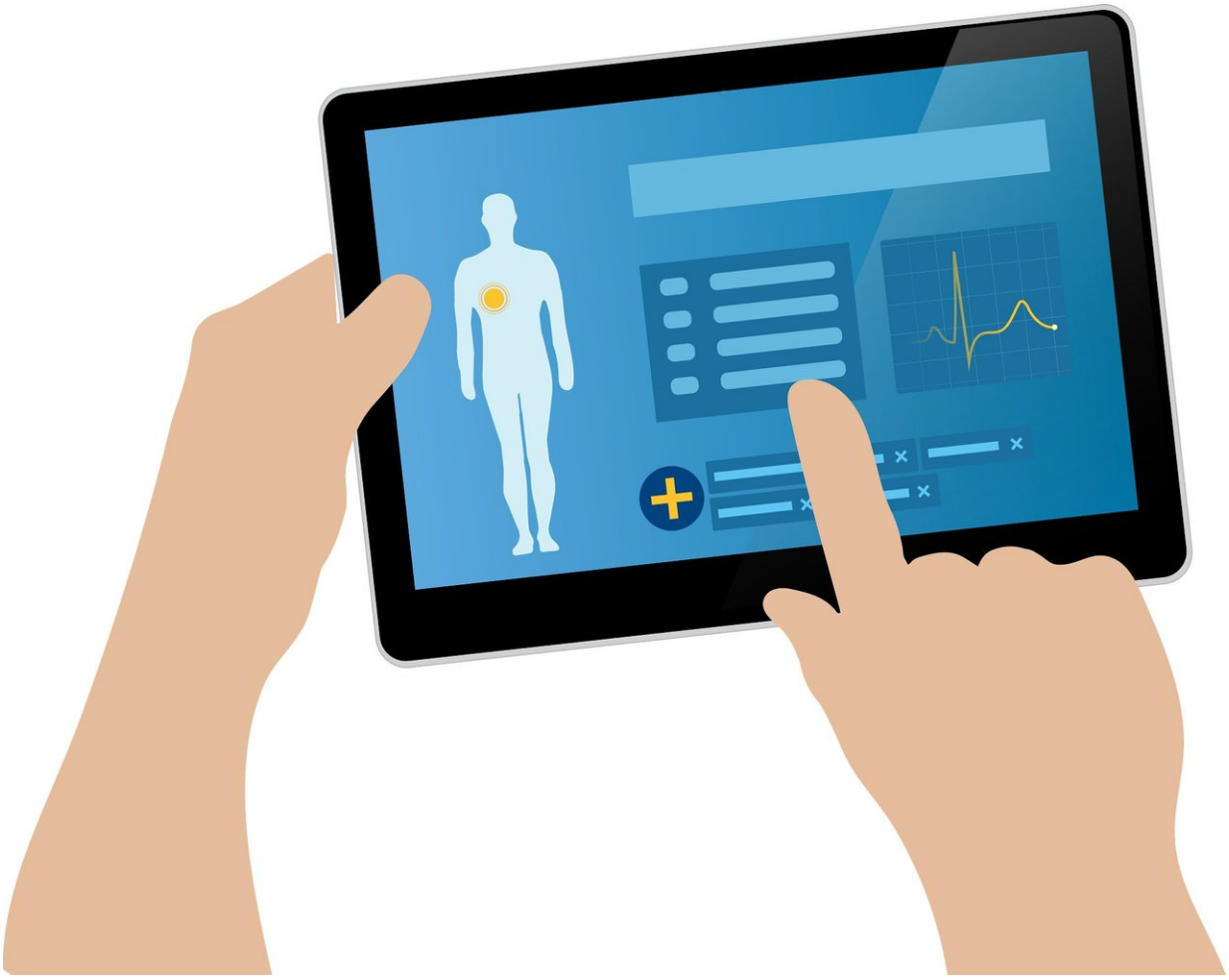

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Simple, personalized alerts embedded in a patients' electronic health record (EHR) led to a wider use of guideline recommended lipid-lowering therapies at 90-days, according to a study by Yale School of Medicine researchers.

For patients with cardiovascular disease, lowering LDL-cholesterol has been shown to reduce the risk of future adverse events, including heart attack and stroke. Despite this evidence and guidelines recommending their use, lipid-lowering therapies are underused in clinical practice.

PROMPT-LIPID (Pragmatic Trial of Messaging to Providers about Treatment of Hyperlipidemia) is a pragmatic, randomized trial focused on improving the management of a common condition—hyperlipidemia or high cholesterol—using real-time, individualized, informational, automated electronic alerts. The results could help improve clinical decision-making and optimize use of evidence-based lipid-lowering therapies.

The results were presented Nov. 7 at the American Heart Association's Scientific Sessions.

Led by Nihar Desai, MD, MPH, associate professor and the principal investigator of this study, F. Perry Wilson, MD, associate professor and director of Yale's Clinical and Translational Research Accelerator (CTRA), and Tariq Ahmad, MD, MPH, associate professor and chief of the Heart Failure Program, PROMPT-LIPID, enrolled 2,500 patients from 100 outpatient providers within the Yale New Haven Health System. Providers were divided into two groups where one cohort received real-time, targeted, and tailored alerts about the opportunity to intensify lipid-lowering therapy to reduce the risk of cardiovascular disease.

Overall, there were important increases in the use of evidence-based

lipid-lowering therapies, numerically higher among providers receiving alerts. Importantly, among the subset of providers who positively interacted with the decision alert, there was a significant, two-fold, increase in the intensification of treatment.

"Professional guidelines recommend the use of evidence-based therapies to reduce LDL-C (low-density lipoprotein cholesterol). Patients who have experienced a heart attack or stroke have a higher risk for a cardiovascular event. If such a patient has an LDL-cholesterol above 70 mg/dL, current guidelines recommend intensifying their lipid-lowering medications, using higher doses of statins, or adding non-statin medications, such as ezetimibe or PCSK9 inhibitors," said Desai.

The findings suggest that a decision-alert embedded within the electronic health record can help improve the quality of care for patients with cardiovascular disease. Such an intervention could be widely scaled and also coupled with other quality improvement initiatives to optimize LDL-cholesterol levels and reduce cardiovascular risk.

"We have multiple classes of drugs at our disposal. Statins have been available for a long time, in addition to which we can reach for ezetimibe, PCSK9 inhibitors and others. Despite all of the evidence, most patients will not achieve the guideline-recommend LDL level, for a variety of reasons. Our findings demonstrate the benefit of implementing a real-time, individualized, targeted alert."

Provided by Yale University