

Low statin use in people with diabetes despite cardioprotective effects, guidelines

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Nearly 2 out of 5 people with diabetes who could benefit from statin therapy to lower their risk of future heart attack, stroke and related death were not prescribed one, according to a research letter published today in the *Journal of the American College of Cardiology*. The analysis also showed wide variation in statin use across cardiology practices included in the study.

Previous studies have shown that taking a statin can significantly cut the risk of a future cardiovascular event in people with [diabetes](#). Researchers say this study is one of the first to look at real-world trends in the use of [statin therapy](#) in this patient population and is intended to help inform and potentially improve practice performance and, ultimately, patient outcomes.

"Patients with diabetes, including those without established [cardiovascular disease](#), have a very high risk of having a heart attack or stroke, and they are also more likely to die of one compared to people without diabetes," said Salim Virani, M.D., Ph.D., cardiologist at the Michael E. DeBakey VA Medical Center, associate professor at Baylor College of Medicine in Houston and senior author. "In this study, we found 38 percent of [patients](#) with diabetes were not on a statin, which can be lifesaving."

Even when patient factors such as age, gender, race, high blood pressure, high cholesterol, tobacco use and insurance coverage were accounted for, there was a 57 percent practice-level variation in statin use. Virani

said this means that if you take two similar patients, one is 57 percent more likely to be prescribed statin therapy on average than a similar patient receiving care at another practice. By comparison, an earlier analysis of statin use among similar patients within the VA health care system showed only 20 percent facility-level variation, which Virani said is likely a reflection of more consistent care, uniform protocols and information technologies, and more consistent medication formulary choices compared to individual cardiology practices.

"Such wide variation illustrates the gap between guideline recommendations and real world practice. Health care providers manage similar diabetes patients differently," Virani said. "While some variation is OK, what we found is concerning and may ultimately affect clinical outcomes."

In November 2013, the American College of Cardiology and the American Heart Association issued guidelines stating that unless contraindicated, statin therapy should be started and maintained in 40-75 year old patients with diabetes whose LDL cholesterol level is ≥ 70 mg/dL based on an assessment of risk to prevent the development of cardiovascular disease. The American Diabetes Association similarly recommends that a statin be used to supplement lifestyle changes in people with diabetes who are 40 and older, regardless of baseline LDL cholesterol levels or whether they have cardiovascular disease.

Researchers examined practice-level variations in statin therapy among 40-75 year old patients with diabetes and no overt cardiovascular disease between May 2008 and October 2013 (before the present guidelines were issued) from the American College of Cardiology's PINNACLE registry, a national cardiology outpatient quality improvement registry that extracts data directly from electronic medical records. Statin use was defined as its prescription at any time point during the study period, as documented in the medical records. A total of 215,193 patients

(582,048 encounters) from 204 cardiology practices were included in the analysis. Compared with patients not receiving statins, those on statins had a higher prevalence of cardiovascular risk factors, were also more likely to receive non-statin cholesterol-lowering therapy (28 vs. 13 percent) and had lower mean LDL cholesterol readings (90 mg/dL vs. 103 mg/dL).

In order to assess the relevance of the study findings in light of evolving clinical guidelines, the researchers also evaluated the results and practice level variation in patients whose LDL-C was

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