

Many hospitalized heart patients not getting protective statin medications upon discharge

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Researchers from the Intermountain Medical Center Heart Institute in Salt Lake City examined the records of 62,070 adult patients with atherosclerotic cardiovascular [disease](#) from 1999 to 2013 who had survived their initial hospitalization and were followed for at least three years, or until they died.

While 71 percent of the 62,070 patients discharged for those medical conditions were prescribed statins, just 37.4 percent were on statins a year later. Three years after leaving the hospital, researchers found the number had dropped to 30.1 percent.

Researchers say these figures are significant because statins are a class of drug therapy that lowers cholesterol levels in the blood and help reduce a patient's risk of additional adverse cardiovascular events.

Researchers will present findings from the study at the 2017 American Heart Association Scientific Sessions in Anaheim, CA, on Nov. 14.

"Earlier studies had proven that a strong predictor of how well patients did in the long-term was whether they were discharged from the hospital on a [statin](#) medicine," said J. Brent Muhlestein, MD, a cardiovascular researcher at the Intermountain Medical Center Heart Institute, and lead investigator of the study.

In 1999, Intermountain Healthcare established a hospital-based discharge medication program so patients admitted for [heart](#) disease—including coronary artery disease, heart failure, and atrial fibrillation—would be prescribed statin therapy to reduce the need for future admissions.

What researchers didn't know at that time, however, was how long patients stayed on the statins. And patients who had [cerebrovascular disease](#) or [peripheral artery disease](#) weren't part of the discharge medication program and usually didn't receive a prescription, though research showed they'd benefit from statins, too.

"By implementing this program and discharging

patients on statins, we were able to see a significant reduction in repeat hospitalizations and mortality over the next year," said Dr. Muhlestein.

Knowing whether patients who were on statins stayed on them over time was important, he said, because the benefit of the medication hinges on continuing to take it.

In their current study, the Intermountain Medical Center Heart Institute researchers decided to see how many patients remained on statins and to identify reasons why patients who should be taking that type of drug therapy were not.

Most patients in the new study had coronary artery disease (69 percent), compared to cerebrovascular disease (18.6 percent) and peripheral artery disease (12 percent).

Besides determining who'd been prescribed statins and whether they remained on them, researchers also used multivariable analysis to identify the independent predictors of long-term statin use.

In all, fewer than one-third of patients who'd been discharged with an [atherosclerotic cardiovascular disease](#) were on statins after three years.

"That's a major treatment gap," said Dr. Muhlestein.

Reasons patients weren't on the medications were usually non-medical, Intermountain Medical Center Heart Institute researchers found:

- The strongest predictor of patients who were no longer taking the medication was that they were well on the drug for three years.

"That was a little bit unexpected," said Dr. Muhlestein. If, however, they'd had a heart attack since they left the hospital, they were more likely to still be taking the drug.

- The patient's discharge medication protocol made a difference, with 71 percent of discharged patients getting the statin therapy they needed. But three years later, that number had dropped overall to about

30 percent. Even among those with [coronary artery disease](#) who left the hospital on the medication, half had stopped taking it. And far fewer of those with peripheral artery disease or cerebral vascular disease were on statins.

- If doctors hadn't ordered another LDL cholesterol screening after placing the patient on statins, the patient was three times more likely to stop taking the medication than those who had another LDL cholesterol screening.
- Patients who'd been on a statin prior to their heart disease diagnosis were more likely to stay on it.
- Medication cost played a role, too. Patients with insurance were more likely to remain on the medication than those who paid for the medication themselves.

The researchers are now looking for ways to increase the number of [patients](#) who are prescribed statins if it's appropriate, and for ways to increase long-term use.

Dr. Muhlestein said one idea is to expand the discharge [medication](#) protocol from the hospital to physician clinics to track statin prescribing and compliance in a systematic way. The joint recommendation panel of the American Heart Association and the College of Cardiologists, the AHA/CC, has begun to recognize that additional LDL cholesterol screenings may be beneficial.

Education is another potential tool, especially in the face of anecdotal negative claims about statins that aren't based on credible data, Dr. Muhlestein said. People hear the drugs cause muscle aches or can cause mental complications. While those are either rumors or relatively rare, Dr. Muhlestein said the benefits of statins are real. They save lives.

There's a tantalizing other approach, too.

"We need to find a better class of drugs," he said. "Researchers are working on that—testing a new class of drugs called PCSK9 inhibitors, which have the potential for filling that treatment gap because they have, as of yet, no identified side-effects. Original studies show they're very safe, but their

safety has to be proven in large trials."

For now, he said, people need to stay on their statins.

Provided by Intermountain Medical Center

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