Women remain less likely to receive high-intensity statins following heart attack

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Less than half of women who filled a statin prescription following a heart attack received a high-intensity statin—indicating they continue to be less likely than men to be prescribed this lifesaving treatment, according to a study published today in the *Journal of the American College of Cardiology*. The persistent gap in heart disease treatment between women and men continues despite similar effectiveness of more-intensive statins for both sexes and recent efforts to reduce sex difference in guideline-recommended treatment.

The 2013 American College of Cardiology/American Heart Association Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults recommends the use of high-intensity statin therapy for women and men less than 75 years of age with established heart disease for secondary prevention.

"Prior studies have found that women are less likely than men to receive treatment with statins following a heart attack. Our study shows that even when women receive statins, these continue to be in lower intensities than the guidelines recommend. The underutilization of these drugs in women was not explained by sex differences in demographics, comorbidities or health care utilization," said Sanne A.E. Peters, PhD, a research fellow in epidemiology at the George Institute for Global Health at the University of Oxford and the lead author of the study.

Using the MarketScan and Medicare databases, researchers analyzed data from 88,256 U.S. adults who filled a statin prescription within 30
days after hospital discharge for a heart attack between January 2014 and June 2015. High-intensity doses were the first statin prescription fill following hospital discharge after heart attack for 47 percent of women and 56 percent of men.

Trends in sex differences in high-intensity statin use over time were examined using beneficiaries with the same inclusion criteria between January 2007 and June 2015. Overall, high-intensity statin prescription fills increased from 22 percent to 50 percent in women and from 27 percent to 60 percent in men.

Researchers found no evidence of the sex difference in the use of high-intensity statins post heart attack diminishing between 2007 and 2015 or following the publication of the 2013 ACC/AHA cholesterol guideline.

"While we found that the magnitude of the sex difference in the use of high-intensity statins after heart attack was larger among the youngest and oldest patients and among those without comorbidities, women were consistently less intensively treated across a broad range of patient characteristics," Peters said. "This gap between our youngest and oldest patients is concerning because the oldest are at the highest risk and young women have been shown to have the slowest rate of decline in heart disease rates in the United States. The underutilization of high-intensity statins in women can be expected to result in a substantial number of preventable vascular events."

The researchers said clinicians may perceive women who have experienced a heart attack to be at a lower risk of recurrence than their male counterparts. A previous study found that sex disparities in treatment were in part due to clinicians' lower perceived heart disease risk in women. The sex difference in the use of high-intensity statins may be explained by variation at the hospital or health care provider level.
"Clinicians should communicate the benefits of high-intensity statins to their female patients in terms of reducing the risk of another heart attack and discuss possible concerns about side effects," Peters said. "Moreover, clinicians themselves should also be aware of the risk of recurrent heart attack in their female patients and the persistent sex disparity in the utilization of high-intensity statins."

In an accompanying editorial, Annabelle Santos Volgman, MD, FACC, and colleagues at Rush Medical College, stated the importance of determining the barriers facing both women and men in receiving guideline-recommended care. They also noted pathophysiologic differences in the disease presentation in women and men may contribute to clinicians treating women less aggressively. Women are more likely to present with nonobstructive disease, which is not benign, but patients and doctors minimize the significance of nonobstructive coronary artery disease leaving patients undertreated with lower intensity statins.

They said, "We think sex should matter, as well as age, race and ethnicities when it comes to patient care and adherence to guidelines. Implementation of such sex-specific strategies will improve CVD outcomes for women and by doing so may also improve outcomes for men."

Limitations of the study include that pharmacy claims identified whether a prescription was filled and do not provide information about the actual written prescription, medication adherence or the reason a clinician may have prescribed a lower-intensity statin.
