



## Low statin adherence increases mortality in patients with ASCVD



Using a national sample of U.S. Veterans Affairs patients with atherosclerotic cardiovascular disease (ASCVD), a JAMA study found that a low adherence to statin therapy was associated with a greater risk of dying. Women, minorities, younger adults, and older adults were less likely to adhere to statins. These findings underscore the importance of finding methods to improve adherence.

Previous research has shown that using the highest statin intensity is associated with a survival benefit in patients with ASCVD. Given the evidence of the effectiveness of statins in reducing ASCVD events and mortality, the recently updated 2018 ACC/AHA cholesterol treatment guidelines recommend statins as the mainstay of treatment for patients with ASCVD and emphasise the importance of tracking adherence in routine follow-up. However, statin adherence remains suboptimal.

The current study sought to determine the association between statin adherence and all-cause mortality for patients with ASCVD who have stable statin prescriptions. This retrospective cohort analysis included patients who were between ages 21 and 85 years and had 1 or more International Classification of Diseases, Ninth Revision, Clinical Modification codes for ASCVD on 2 or more dates in the previous two years without intensity changes to their statin prescription. All patients were treated within the Veterans Affairs Health System between January 2013 and April 2014.

For this study, statin adherence was defined by the medication possession ratio (MPR). Adherence levels were categorised as an MPR of less than 50%, 50% to 69%, 70% to 89%, and 90% or greater. For dichotomous analyses, adherence was defined as an MPR of 80% or greater.

Of 347,104 eligible adults with ASCVD who had stable statin prescriptions, 5,472 (1.6%) were women, 284,150 (81.9%) were white, 36,208 (10.4%) were African American, 16,323 (4.7%) were Hispanic, 4,093 (1.2%) were Pacific Islander, 1,293 (0.4%) were Native American, 1,145 (0.3%) were Asian, and 1,794 (0.5%) were other races. Patients taking moderate-intensity statin therapy were more adherent than patients taking high-intensity statin therapy (odds ratio [OR], 1.18; 95% CI, 1.16-1.20). Notably, women were less adherent (OR, 0.89; 95% CI, 0.84-0.94), as were minority groups. Younger and older patients were less likely to be adherent compared with adults aged 65 to 74 years.

During a mean (SD) of 2.9 (0.8) years of follow-up, there were 85,930 deaths (24.8%). Compared with the most adherent patients (MPR  $\geq$  90%), patients with an MPR of less than 50% had a hazard ratio (HR; adjusted for clinical characteristics and adherence to other cardiac medications) of 1.30 (95% CI, 1.27-1.34), those with an MPR of 50% to 69% had an HR of 1.21 (95% CI, 1.18-1.24), and those with an MPR of 70% to 89% had an HR of 1.08 (95% CI, 1.06-1.09).

The findings complement and extend prior work that has shown that discontinuing statins is associated with a higher risk of adverse cardiovascular events, including recurrent stroke and myocardial infarction. As expected, low adherence was associated with higher LDL-C levels and higher rates of hospitalisation for stroke and ischaemic heart disease.

These findings suggest there is a substantial opportunity for improvement in the secondary prevention of ASCVD through optimisation of statin adherence.

Source: [JAMA Cardiology](#)

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