

## Trends in Statin Initiation for Secondary Prevention of Atherosclerotic Cardiovascular Disease in Adults > 75 Years Old

### Faculty Mentor

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### Biosketch

Earl is a second-year PhD student in the Pharmaceutical Outcomes and Policy program at UF, working under the direction of Dr. Vouri. He received two bachelor's degrees (B.S. in Biological Sciences and B.S. in Chemistry) from Arkansas State University in 2015. After completing his undergraduate training, he attended the University of Arkansas for Medical Sciences where he graduated with a PharmD and MPH in 2019. He joined our program in the fall of 2019, and his research interests include identifying and decreasing the prescribing of inappropriate medication in older adults, prescribing cascades, and pharmacovigilance.

### Abstract

**Background:** Statins are a mainstay for secondary prevention of atherosclerotic cardiovascular disease (ASCVD) in older adults. However, guidelines regarding initiation of statins in adults with ASCVD > 75 remain unclear. Therefore, we sought to characterize trends in and determinants of statin initiation among older adults with particular focus on those >75 years old vs. 66-75 years old.

**Methods:** We conducted a retrospective cohort study using Medicare 5% claims from 2011-2018 to identify adults  $\geq$  66 years old with first ASCVD event (myocardial infarction (MI), stroke, transient ischemic attack (TIA), coronary revascularization). Patients were excluded if they had a gap in continuous Part A, B, or D insurance, were <66 years old, or used statins in the 12-month baseline period. Patients were also excluded if they were discharged to hospice or SNF or died within 30 days of ASCVD event. We visualized trends in statin initiators/10,000 index ASCVD events over time and conducted separate multivariable logistic regression stratified on age group to examine the determinants of statin initiation and high-intensity statin initiation.

**Results:** We identified 71,802 older adults with an index ASCVD event who were not treated with a statin in the baseline period. Among those older adults, 29,681 were 66-75 years old, and 42,121 were >75 years old. Adults >75 years old were less likely to be initiated on a statin (OR 0.83: 95% CI 0.81-0.86), and among those who were initiated on a statin, were less likely to be started on a high-intensity statin (OR 0.80: 95% CI 0.77-0.84), compared to older adults 66-75 years old. Older adults with congestive heart failure, diabetes, or chronic kidney disease were less likely to be initiated on a statin. Interestingly, increasing frailty was associated with a lower likelihood of statin initiation, but did not seem to influence the choice of high-intensity statin in adults >75 years old.

**Conclusion:** Overall use of statins in older adults has been increasing in recent years with significant increases in high-intensity statin use over time. However, adults > 75 years old appear less likely to be initiated on a statin, and among those who were initiated on a statin, appear less likely to be started on a high-intensity statin, compared to older adults 66-75 years old. The role baseline characteristics among older adults > 75 years old plays in the decision to initiate statin therapy is important to consider in future studies.