

## Should High-Risk Statin Utilization Rates Be Increased For Complex AMI Patients?

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### Description

Randomized controlled trials have shown that aggressively lowering low density lipoprotein cholesterol (LDL-C) with high-dose statins can result in a reduction of cardiovascular disease (CVD) events compared to moderate-dose statins. Current U.S. guidelines recommend at least a 50% reduction in LDL-C as desirable for cardiovascular prevention in patients following a heart attack, and recommend an even more aggressive goal for very high risk patients. In practice, however, less than 25% of high risk patients receive a high-dose statin, suggesting that providers remain uncertain about the benefits and harms of this treatment for many complex CVD patients. This study assessed the effectiveness of high-dose statin treatment for complex CVD patients. Results can help clinicians develop optimal treatment strategies for patients and help policymakers assess whether changes in high-dose statin utilization rates should be expanded from the current rate.

### Specific Aims

1. Assess the risk, benefits, and costs of high-dose statin treatment following heart attack for patients with prior diagnosis of diabetes, congestive heart failure, or chronic kidney disease.
2. Translate findings to provide evidence for clinicians and policy-makers.

### Findings

- High-intensity statin prescribing post-acute myocardial infarction varies with patient complexity.
- The more complex a patient is, the less likely that patient will be prescribed a high-intensity statin.
- Substantial geographic variation exists across the U.S. in high-intensity statin prescribing practices.

### Main Objective

Assess the comparative effectiveness of high-dose statin treatment for complex cardiovascular disease patients.

### Chronic Conditions Considered

Cardiovascular disease  
Congestive heart failure  
Diabetes  
Chronic kidney disease

### Study Design & Methods

Retrospective cohort design  
  
Risk adjustment estimators (including propensity score methods) and moment-based instrumental variable estimators.

### Data Sources & Sample Size

Medicare fee-for-service and medication claims data between 2007 and 2010 for more than 160,000 patients who experienced a heart attack in 2008 or 2009.

### Strategies Addressed from the HHS Strategic Framework on Multiple Chronic Conditions

- 3.A. Identify best practices
- 4.C. Increase clinical research

# Should High-Risk Statin Utilization Rates Be Increased For Complex AMI Patients? (Continued)

## Implications

Results suggest that higher rates of high-intensity statin use post acute myocardial infarction can increase 1-year survival, but the magnitude and significance of these results vary across subsets of complex patients. High-intensity statin treatments may be warranted for patients with heart failure only, diabetes only, and chronic kidney disease plus diabetes.

## Publications (as of September 2013)

Brooks JM, Cook EA, Chapman CG, Kulchaitanaoraj P, Chrischilles EA, Welch S, Robinson J. Geographic variation in statin use for complex acute myocardial infarction patients: evidence of effective care? *Medical Care*. In Press, 2014.

(Additional publications currently in preparation).

## Posters and Presentations

Brooks J. Should high-risk statin utilization rates be increased for complex AMI patients? 60 Second Presentation at: the Agency for Healthcare Research and Quality Multiple Chronic Conditions Research Network Meeting, 2011 Sept 18-21; Bethesda, MD. Available at:

<http://www.ahrq.gov/about/annualconf11/video/specsessions/primecare02/index.html>



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