

1 in 4 PCI patients have unplanned readmission within six months, study finds

By **Acp Hospitalist Weekly Staff**, acphospitalist.org

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Approximately one in four patients who underwent percutaneous coronary interventions (PCI) had an unplanned readmission within six months, a study found.

Researchers used the U.S. Nationwide Readmission Database to identify patients undergoing PCI between 2010 and 2014 and analyze the rate, causes, predictors, and cost of unplanned readmissions up to 180 days after discharge. Results were published by *JACC: Cardiovascular Interventions* on March 27.

Among more than 2.4 million studied patients, 2.5% were readmitted between 0 and 7 days, 7.6% were readmitted between 8 and 30 days, 8.9% were readmitted between 31 and 90 days, and 8.0% were readmitted between 91 and 180 days (cumulative rates, 2.5%, 9.9%, 18.0%, and 24.8%, respectively). There was a decline in readmissions in all time ranges between 2011 and 2014. The median time to readmission was 35 days (interquartile range, 14 to 79 days), and peak readmission rate occurred at seven days. Daily readmission rates were 0.35% for 0 to 7 days, 0.33% for 8 to 30 days, 0.15% for 31 to 90 days, and 0.09% for 91 to 180 days.

Most readmissions during each time period were due to noncardiac causes (53.1% to 59.6%). Nonspecific chest pain was the most common noncardiac cause of readmission within each time period (14.2% to 22.7% of noncardiac readmissions). The most common cardiac cause for readmission was coronary

artery disease, including angina (37.4% to 39.3% of cardiac readmissions). Other common cardiac causes of readmission were acute myocardial infarction between 0 and 7 days (27.6% of cardiac readmissions) and heart failure during all subsequent time periods (22.2% to 23.7% of cardiac readmissions).

Causes of readmission depend on when they are assessed, and noncardiovascular causes are more common farther out from the initial admission, the authors noted. Any interventions developed to reduce unplanned readmissions should consider these factors, they advised.

An editorial cautioned against legislation that financially penalizes institutions when they fail to meet an “arbitrary benchmark” for readmissions, which may cause unintended consequences, citing the example of the Hospital Readmissions Reduction Program, where a reduction of heart failure admissions was associated with an increase in mortality.

“In conclusion, understanding how often and why patients ‘bounce back’ after PCI should be added to our quality efforts. However, it is unclear how much effort we should expend on preventing readmissions until we know better what to target and how to do it effectively,” the editorial stated.

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