

Report highlights national trends in heart disease treatments

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Over 93 percent of heart attack patients are receiving stents within the guideline-recommended threshold of 90 minutes after arriving at the hospital, with the median time to stenting only 59 minutes, according to a broad report on trends in heart disease care from the American College of Cardiology's National Cardiovascular Data Registry published in the *Journal of the American College of Cardiology*.

The report "Trends in Cardiovascular Care in the United States: a Report from Four American College of Cardiology National Cardiovascular Data Registry Programs" provides insights into the patient populations, participating centers and patterns of care based on 2014 data from 4 of the 10 NCDR programs - CathPCI Registry, ICD Registry, ACTION Registry-GWTG and IMPACT Registry.

The authors of the report said the registry data provide unique perspectives into the care and outcomes of heart disease care in the U.S. and illustrate the strength of national quality programs, like NCDR, in advancing the effectiveness and safety of treatments for heart disease [patients](#).

"We were able to report on the care and outcomes of patients undergoing common cardiovascular procedures, including percutaneous coronary interventions, implantable defibrillators, and interventions for [congenital heart disease](#) as well as for patients with acute heart attacks," NCDR Management Board Chair and lead author of the study Frederick A. Masoudi, MD, MSPH, FACC , said. "In some cases, hospitals are

consistently providing excellent care; the registries, however, allow us to identify those aspects of care where the cardiovascular clinical community can improve."

Key findings from each registry include:

CathPCI Registry

- Of the 667,424 patients undergoing PCI in 2014, 35.3 percent of PCIs were performed for elective indications, compared to 64.7 percent performed for non-elective indications.
- Between 2011 and 2014, the use of femoral access decline from 88.4 percent to 74.5 percent, while the use of radial access increased from 10.9 percent to 25.2 percent.
- Use of evidence-based therapies, including aspirin, P2Y12 inhibitors and statins for eligible patients, continue to remain high at 93.3 percent.
- Median door-to-balloon time for primary PCI for STEMI also remains strong at 59 minutes for patients receiving PCI at the presenting hospital and 105 minutes for transfer patients.

ICD Registry

- Of the 158,649 patients receiving ICD therapy in 2014, 120,228 received a device for primary prevention reasons, compared to 38,421 who received a device for secondary prevention indications.
- Of all ICD implants in 2014, 25 percent involved single chamber devices, 32 percent involved dual chamber devices and 43 percent involved CRT-D devices, compared to 19 percent, 37 percent and 44 percent, respectively, in 2011.
- While use of evidence-based therapies are generally high,

performance on a composite medication metric, including use of ACE or ARB for patients with LVSD and beta blockers for patients with LVSD, could be a target for quality improvement efforts. Between 2011 and 2014 the composite rate of use grew from 76.7 percent to 80.3 percent, with room for continued improvement.

ACTION Registry-GWTG

- Of the 182,903 patients with acute myocardial infarction (AMI) in 2014, 71,368 had ST-segment elevation MI (STEMI), while 111,535 had non-ST-segment elevation acute coronary syndromes (NSTEMI).
- There is room for improvement in the areas of overall defect-free care (78.4 percent); P2Y12 inhibitor use in eligible patients (56.7 percent); and use of aldosterone antagonists in patients with LV systolic dysfunction and either diabetes or heart failure (12.8 percent).
- Compared to NSTEMI patients, STEMI patients were more likely to experience certain adverse events during hospitalization, including death (6.4 percent vs. 3.4 percent); cardiogenic shock (4.4 percent vs. 1.6 percent), or bleeding (8.5 percent vs. 5.5 percent).
- Of the STEMI patients, 95.8 percent underwent coronary angiography and 90.7 percent underwent PCI, compared to NSTEMI patients of which 81.9 percent underwent coronary angiography and 52.4 percent underwent PCI.

IMPACT Registry

- Of the 20,169 patients with congenital [heart disease](#) undergoing cardiac catheterization or a catheter-based intervention, 86

percent were under the age of 18 and 24.6 percent were under one year old.

- Procedures such as atrial septal defect (ASD) closure, patent ductus arteriosus (PDA) closure, aortic coarctation stenting and pulmonary valvuloplasty had success rates exceeding 84 percent. Aortic coarctation balloon angioplasty was less successful at 55.1 percent.
- Device embolization was reported in 1.2 percent of ASD closure procedures and 1.1 percent of PDA closure procedures. A clinically significant increase in aortic regurgitation follow valvuloplasty was noted in 10.6 percent of cases.

In a corresponding executive summary also published in JACC, Masoudi said "NCDR data provide a unique, clinically rich national perspective on the care and outcomes of high-impact cardiovascular conditions and procedures that are not available elsewhere."

Provided by American College of Cardiology

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