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**Implantable Cardioverter-Defibrillators Underused Among Older Patients After Heart Attack**

Among Medicare patients who experienced a heart attack from 2007 to 2010, fewer than 1 in 10 eligible patients with low ejection fraction (a measure of how well the left ventricle of the [heart](http://en.wikipedia.org/wiki/Heart) pumps blood with each beat) received an implantable cardioverter-defibrillator (ICD) within 1 year after the heart attack, even though ICD implantation was associated with a lower risk of death at 2 years after implantation, according to a study in the June 23/30 issue of *JAMA*.

More than 350,000 people experience sudden cardiac death in the United States annually. Clinical trials have established the benefit of primary prevention ICDs among patients with low ejection fraction (EF). ICDs are not recommended within 40 days of a myocardial infarction (MI; heart attack). Given this need to wait, ICD consideration is susceptible to errors of omission during the transition of post-MI care between inpatient and outpatient care teams. In addition, uncertainties regarding ICD effectiveness, along with other considerations of treatment goals and procedural risk, may discourage ICD implantation among older adults, according to background information in the article.

Sean D. Pokorney, M.D., M.B.A., of the Duke University Medical Center, Durham, N.C., and colleagues examined ICD implantation rates and associated mortality among Medicare beneficiaries with an EF of 35 percent or less after MI, treated at 441 U.S. hospitals between 2007 and 2010. Follow-up data were available through December 2010.

The final study population included 10,318 post-MI patients (median age, 78 years) who were potentially eligible for primary prevention ICD implantation. The cumulative 1-year ICD implantation rate among the patients was 8.1 percent. Patients who received an ICD within 1 year after MI were younger and were more likely to be male; to have larger infarcts (area of damage in heart caused by impaired circulation), prior coronary artery bypass graft procedures (31 percent vs 20 percent), and evidence of cardiogenic shock (shock due to low blood output by the heart) during index hospitalization (13 percent vs 8 percent), relative to patients who did not receive an ICD within 1 year.

Implantation of ICD was associated with a 36 percent lower risk of death at two years. The rate of early cardiology follow-up within 2 weeks after discharge was higher among patients who did vs did not receive an ICD within 1 year (30 percent vs 20 percent).

“Additional research is needed to determine evidence-based approaches to increase ICD implantation among eligible patients,” the authors write.

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**Editor’s Note**: Please see the article for additional information, including other authors, author contributions and affiliations, financial disclosures, funding and support, etc.

**Editorial: Underutilization of Implantable Cardioverter-Defibrillators in Older Patients**

“Even if the ICD implantation rate were twice what Pokorney et al found, it is concerning that so few potentially ICD-eligible elderly patients are undergoing implantation, especially considering that ICDs significantly improve survival,” writes Robert G. Hauser, M.D., of the Minneapolis Heart Institute, Abbott Northwestern Hospital. Allina Health, Minneapolis, in an accompanying editorial.

“Even though the use of ICDs for primary prevention may not seem to make as much sense for an 80-year-old patient as it does for a patient in his or her 50s or 60s, an older patient at risk for sudden cardiac death should have the same opportunity to choose potentially lifesaving therapy. The report by Pokorney et al provides important data on the utilization of ICDs and the clinical outcomes related to ICD therapy after MI, so physicians and their patients can be better informed during discussions about the risks and benefits of ICDs in older persons.”

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**Editor’s Note**: The author has completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

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