

Rising DES use costs Medicare \$1.57 billion/year

APRIL 26, 2011 | [Shelley Wood](#)

Philadelphia, PA – New details from a study addressing the impact on healthcare costs of increased medical device use have been published online April 25, 2011 in the *Archives of Internal Medicine*, suggesting that use of drug-eluting stents (DES) alone has added more than \$1.57 billion to annual Medicare costs in the US. What's more, a lot of the increased price tag for Medicare appears to be coming from patients with stable disease, in whom invasive procedures are often no better than best medical therapy.

[Earlier results from the analysis](#) by **Dr Peter Groeneveld** (Philadelphia VA Medical Center, PA) and colleagues were first released last year at the **American Heart Association Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke 2010 Scientific Sessions** in Washington, DC, as reported by [heartwire](#). That analysis looked at Medicare claims data from 2003 to 2006 for both DES and implantable cardioverter defibrillators (ICDs) across 306 US regions. According to Groeneveld, *Archives* wasn't interested in publishing the ICD data at this time.

The newly published *Archives* article looks only at DES use but peers more closely into coronary disease subcategories. Costs taken into consideration were not just for the stents themselves, but also other facility and healthcare-provider Medicare payments, adjusted for inflation over the study period.

Two million patients, billions in costs

In all, 1 981 088 Medicare patients aged 66 to 85 years, diagnosed with CAD, were treated between 2002 and 2006, when DES use rose from 0% to 23% among patients with acute MI, 29% among patients with noninfarction ACS, and 1.1% among patients without ACS. Costs, likewise, rose, but to varying degrees according to patient subset: overall change in costs attributable to DES use (expressed as a mean per-patient cost) was \$198 overall but increased as much as \$999 in noninfarct ACS patients, \$657 in AMI patients, and \$146 in non-ACS patients.

But, the authors note, most patients with CAD over this time period were non-ACS patients: as such, the cost growth attributable to DES use was 68% in this group. That "is troubling" said Groeneveld in an interview with [heartwire](#), for two reasons.

"Number one, non-ACS patients represent the vast majority of coronary disease patients in the US, and number two, in patients who do not have ACS, it's very unclear that any of them should be getting PCI at all. The [COURAGE](#) trial, for example, suggested that PCI is no better than medical therapy in improving survival in patients who have stable angina. And then there are patients who don't even have angina, who have CAD but no symptoms, and certainly we don't think PCI helps those patients either. So if there is more PCI happening, and more costs associated with PCI, and most of those are occurring in a population that's not getting any survival benefit or quality-of-life benefit out of it, that is what's troubling."

While a 1.1% increase in costs among non-ACS patients "sounds low," Groeneveld believes that number should, in fact, be zero.

He also points out that while DES themselves cost much more than bare-metal stents, the cost increases represent something bigger.

"The bulk of the cost growth that we observed here is not from the technology itself, it's actually from all the other stuff that happens when more devices are used. There's more DES use, but there's also more diagnostic tests being ordered; that means there's more consultations being ordered, more medications being prescribed. It's a cascade effect."

And of note, their analysis did not take into account outpatient costs postprocedure, including long-term **clopidogrel** prescriptions.

Meteoric rise in use and costs

In an editor's note accompanying the study [2], *Archives* editor **Dr Rita Redberg** (University of California, San Francisco) describes the rising use of DES as "meteoric."

"By 2005, DES were over 90% of all first stents placed," Redberg writes. What's more, over 60% of DES are used for off-label indications, which tend to lead to more adverse events than procedures for on-label indications, she notes.

"It is time to clearly define what the value of this extraordinary investment has been in terms of patient benefits and study the harms and determine if we are getting good value for this outlay," Redberg concludes.

Sources

1. Groeneveld PW, Polsky D, Yang F, et al. The impact of new cardiovascular device technology on health care costs. *Arch Intern Med* 2011; doi:10.1001/archinternmed.2011.141. Available at: <http://archinte.ama-assn.org>
2. Redberg R. Editor's note. *Arch Intern Med* 2011; in [1].

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