



DMS doctoral student David Radley quantified off-label prescription drug use in an *Archives of Internal Medicine* paper that was deemed a “must read” in the May 19 *Medical Economics*.

## Women versus men in matters of the heart

A popular treatment for cardiovascular disease is as safe and effective for women as it is for men, found a recent DMS study. Led by cardiologist Craig Thompson, M.D., the study did reveal many differences between male and female patients, but their overall outcomes were similar.

The treatment in question—percutaneous coronary intervention (PCI) with drug-eluting stents—has become the procedure of choice for patients whose only alternative several years ago would have been coronary artery bypass surgery. PCIs are favored over bypass surgery because they’re noninvasive and require a much shorter recovery time.

PCI involves feeding a catheter—a tiny flexible tube—through an artery in the abdomen, leg, or arm into a blocked blood vessel on the heart. The tube acts as a tunnel through which cardiologists can insert tools to clean and widen the diseased vessel. Then a mesh tube called a stent is inserted to keep the vessel walls open so blood can flow freely.

Drug-eluting stents (DESs) are coated with a time-release medicine that prevents re-blockage of the vessel. Since coming on the market in 2003, DESs have “completely changed the landscape of in-

terventional cardiology,” says Thompson. He and several other cardiologists at DHMC have been tracking how PCI patients have fared since DESs were introduced. Their most recent study, on gender-based differences, was published in December 2005 in *Catheterization and Cardiovascular Interventions*.

In the gender-based study, Thompson found that “women tend to present with coronary disease later in life than men do, and at that point may have other medical illnesses that track along with it.” Among the study’s patients, women were more likely to have heart failure and high blood pressure and to be older, obese, and diabetic, whereas men had higher rates of smoking and more obstructed vessels. After Thompson adjusted the results for these differences, the similarities in outcomes for men and women were clear.

The study also found that women on either end of the body mass spectrum—very small or very large—are more susceptible to vascular and renal complications than average-sized women. The complications included swelling or bleeding at the PCI access site and some degree of kidney dysfunction. The correlation between body mass, age, and complications was so strong that Thompson says his team “could predict vascular complications” based on those factors alone.

What do these findings mean for the future of PCI? Thompson says his team plans to “explore different ways to approach catheterization in women,” such as performing the procedure from the wrist rather than the leg, using larger or smaller stents, and trying new blood-thinning agents that wear off very quickly.

But “all in all,” Thompson concludes, “our ability to get the stents in place [and] to have a technically successful procedure . . . was pretty comparable between men and women.”

Laura Evancich

### Is bypass better?

Heart-bypass surgery trumps catheter-based procedures in patients over 80, concluded a recent seven-center study. The DHMC-based Northern New England Cardiovascular Disease Study Group compared the survival rates of nearly 1,700 patients aged 80 to 89 who underwent either a catheter-based coronary procedure—called percutaneous coronary intervention (PCI)—or heart-bypass surgery. Short-term survival was better among the PCI patients, but after six months heart-bypass surgery took the lead. DHMC surgeon Lawrence Dacey, M.D., was the lead investigator.



### Utility notice

Physicians order the test 100,000 times a year, and with good cause it seems. Esophageal manometry (EM)—in which a tube is inserted into the esophagus to measure its muscle action—provides new information for diagnosis 86% to 100% of the time, according to a survey by DHMC gastroenterologist Brian Lacy, M.D., Ph.D. Presenting his findings at an American College of Gastroenterology meeting, Lacy said that information gleaned from EM led to a change in patient management in up to 60% of the cases in his study. That’s not bad for a test whose clinical utility had never before been formally evaluated. ■



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Cardiologist Thompson, left, found that overall, women fare as well as men after having a PCI.