



**CHRISTIANA CARE
HEALTH SYSTEM**

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Coronary angioplasty isn't cost effective in patients with chronic artery disease

Wilmington, DE - Angioplasty may add about \$10,000 to costs of treatment "without significant gain in life years or quality-adjusted life years," according to a new evaluation of data from the now seminal COURAGE study (**Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation**).

The analysis demonstrates that medical therapy alone offers similar outcome at lower cost. William S. Weintraub, MD, Christiana Care Health System's John H. Ammon Chair of Cardiology, Chief of the Section of Cardiology and the analysis' lead author said, "The COURAGE trial did not find adding angioplasty (also known as percutaneous coronary intervention or PCI) to optimal medical therapy to be a cost-effective initial management strategy for symptomatic, chronic coronary artery disease," Weintraub said.

Previously, the COURAGE trial compared the effect of angioplasty to reopen clogged arteries plus optimal medical therapy to optimal medical therapy alone. The study released today assessed costs of hospitalization and medication for the 2,287 patients randomized between 1999 and 2004 to PCI or medical therapy. Scientists used Framingham study survival data to estimate patients' life expectancy beyond the trial. The incremental cost-effectiveness ratio (ICER) was expressed as cost per life-year and cost per quality-adjusted life-year gained. ICERs varied from \$168,000 to

\$300,000 per life-year of quality-adjusted life-year gained with PCI. The costs per patient for significant improvement in angina chest pain frequency, physical limitation and quality of life were \$154,580, \$112,876 and \$124,233, respectively.

“The data published from the COURAGE Trial economic analysis are intended to provide patients and physicians with more information as they discuss and refine various treatment options for stable angina,” commented Timothy Gardner, MD, medical director of Christiana Care’s Center for Heart & Vascular Health and President of the American Heart Association. “Dr. Weintraub’s contribution to this important cardiovascular trial is very significant. When economic and health outcomes of clinical trials are analyzed and presented, we can more fully assess the impact of the specific treatment or therapy. Viewing the complete picture is critical for patients as they consider treatment options and also is important to other stakeholders in society such as government, payers and health policy groups.”

This newly published data expands upon other previously published COURAGE study which showed that in 2,287 patients from the U.S. and Canada, optimal medical therapy was as effective as optimal medical therapy *and* percutaneous coronary intervention (cardiac catheterization, such as angioplasty, stents and atherectomy) in reducing the risk of subsequent heart attacks or death in patients with chronic angina (chest pain) and stable coronary disease.

Four other Christiana Care researchers join Dr. Weintraub in authoring this analysis in the debut issue of the American Heart Association’s *Circulation: Cardiovascular Quality and Outcomes*: Paul Kolm, Ph.D., Claudine Jerkovitz, MD, MPH, Wei Zhang, MS, and Jim Bowen, BS.

Christiana Care Health System is one of the region's largest health care providers, serving Delaware and neighboring areas in Maryland, Pennsylvania and New Jersey. A not-for-profit teaching hospital, Christiana Care is recognized as a regional center for excellence in cardiology, cancer and women's health services, as well as for its Level-I trauma care and Level-3 neonatal intensive care (both highest capability). Christiana Hospital is the only Level I trauma center between Philadelphia and Baltimore. Christiana Care includes two hospitals with 1,100 patient beds, a home health care service, preventive medicine, rehabilitation services, a network of primary care physicians and an extensive range of outpatient services. With more than 10,000 employees, Christiana Care is the largest private employer in Delaware and the 10th largest employer in the Philadelphia region. In 2007 Christiana Care had more than \$1.5 billion in total patient revenue and provided the community with \$35.7 million of free care and medicine last year. Find more information at www.christianacare.org