

Immediate Release

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Christiana Care-led Study Shows Grafting Surgery Provides Better Value than Angioplasty

Research Examines Costs and Quality of Life Benefits of Two Common Heart Procedures

(WILMINGTON, Del. – January 14, 2015) Coronary bypass graft surgery commonly used to treat patients with coronary heart disease results in improved quality of life but also costs more than another often-used less invasive technique, [Christiana Care Health System](#) researchers report this month in the Journal of the American College of Cardiology.

Known as the ASCERT (American College of Cardiology Foundation–The Society of Thoracic Surgeons Collaboration on the Comparative Effectiveness of Revascularization Strategies) study, this research represents the first of its kind nationwide to evaluate and compare hundreds of thousands of clinical and claims data to determine both the survival benefit and overall costs of coronary artery bypass graft compared to percutaneous coronary intervention, another common surgical procedure that is also referred to as angioplasty.

The study found that patients who underwent bypass graft surgery lived longer and were able to function better and had less additional procedures than those treated with angioplasty. Researchers drew their conclusions by analyzing a widely-accepted metric known as quality-adjusted life-years.

“While other studies have compared the costs of the two types of treatment, we wanted to probe deeper to understand the value of these procedures to patients,” said Zugui Zhang, PhD, a senior biostatistician and scholar at Christiana Care’s Value Institute, and lead author in the study. “Although the grafting procedure costs more, we also found that patients who underwent that procedure lived longer and had fewer additional procedures.”

Over a four-year period, the study looked at people 65 years or older with coronary heart disease in two or three of their heart vessels.

In addition to the quality of life metrics, researchers found the grafting procedure also resulted in higher costs per patient than angioplasty in three areas:

- Hospitalization was on average \$10,670 more.
- Clinical care after the surgery was on average \$8,145 more.
- Lifetime projected costs after the surgery was on average \$11,575 more.

Coronary heart disease is the most common type of heart disease, killing nearly 380,000 people annually, according to the U.S. Centers for Disease Control & Prevention.

“Coronary heart disease affects so many of our neighbors, so our hope is to provide patients and their families with knowledge so they can make informed decisions on their health care,” Zhang said. “Through this study, we have found that coronary artery bypass grafts provide a reasonably better value to patients when compared to angioplasties.”

ASCERT is a series of major studies that evaluates the long-term effectiveness and costs of the grafting procedure and angioplasty, using clinical and claims data from the American College of Cardiology and the Society of Thoracic Surgeons. The study is sponsored by a grant from the U.S. National Heart, Lung, and Blood Institute and an Institutional Development Award from the National Institute of General Medical Sciences of the U.S. National Institutes of Health.

Christiana Care co-authors on the study are William S. Weintraub, M.D., MACC, FAHA, FESC, John H. Ammon Chair of Cardiology at Christiana Care and Paul Kolm, PhD, Director of Biostatistics.

Weintraub is also the founding director of the Center for Outcomes Research at the Christiana Care Value Institute, which leads the way in conducting real-world research on today’s most pressing health care issues. The Value Institute’s mission is to develop, deliver and evaluate innovative health care solutions that meet the “triple aim” of improving patient experience and population health while reducing health care costs.

Other co-authors include Maria V. Grau-Sepulveda, M.D., MPH; Angelo Ponirakis, PhD; Sean M. O’Brien, PhD; Lloyd W. Klein, M.D.; Richard E. Shaw, PhD; Charles McKay, M.D.; David M. Shahian, M.D.; Frederick L. Grover, M.D.; John E Mayer, M.D.; Kirk N. Garratt, M.D., MSc; Mark Hlatky, M.D.; Fred H. Edwards, M.D.

About Christiana Care Health System

Christiana Care Health System is one of the country’s largest health care providers, ranking as the 22nd leading hospital in the nation and 12th on the East Coast in terms of admissions. A not-for-profit teaching hospital affiliated with Sidney Kimmel Medical College at Thomas Jefferson University, Christiana Care is recognized as a regional center for excellence in cardiology, cancer and women’s health services. Christiana Care is home to Delaware’s only Level I trauma center, the highest capability center and the only one of its kind between Philadelphia and Baltimore. Christiana Care also features a Level III neonatal intensive care unit, the only delivering hospital in Delaware that offers the highest level of non-surgical care to the most critically ill newborns. 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.

For more information about Christiana Care, visit www.christianacare.org/howeare.

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