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**Bariatric Surgery Rates All Over the Map**

*Wide Regional Variations in Surgery for the Obese Do Not Reflect Rates of Obesity or Diabetes*
*Researchers Call for Shared Decision-making Among Patients, Providers*

**Lebanon, N.H. (September 16, 2014)** – Medicare beneficiaries are 27 times more likely to undergo bariatric surgery in Muskegon, Michigan than in San Francisco, according to a new report from the Dartmouth Atlas Project examining unwarranted variations in surgical treatment for obesity.

Research from a new series of reports called "Variation in the Care of Surgical Conditions," from the Dartmouth Atlas of Health Care, found that a region's rate of bariatric surgery "had virtually no relationship" with its population's rates of diabetes and obesity. The report also found that while the preferences of the region's health care providers, a reflection of their training and experiences, are a major contributor to variations, patient preferences are not.

"These stark regional variations raise important questions about a lack of consensus within the medical community regarding the use of bariatric surgery and the role of patients in making fully informed decisions about their care," said Bradley N. Reames, M.D., M.S., a research fellow at the University of Michigan who co-authored the report along with Philip Goodney, M.D., M.S., director of the Center for the Evaluation of Surgical Care at Dartmouth Hitchcock Medical Center, David Goodman, M.D., M.S. principal investigator of the Dartmouth Atlas, and other colleagues. "With so many Americans facing the prospect of bariatric surgery to treat morbid obesity, and at a significant cost to the nation, it is imperative that we do a better job of helping patients navigate the complex treatment choices they face."

The rise in rates of obesity, along with the increasing use of less invasive surgical options, has resulted in a dramatic increase in bariatric surgery in recent years—but the increase has not been geographically uniform. The report documents variations in the period 2007-2011 that range from fewer than 9 procedures per 100,000 Medicare beneficiaries in San Francisco (4.0), San Mateo County (7.9), and Santa Rosa, California (8.4) to more than 80 per 100,000 in Muskegon, Michigan (110.9) and Kettering, Ohio (83.7). The national average was 32.8 per 100,000 enrollees.

The report notes that while fewer than 150,000 bariatric surgical procedures were performed in 2010, the potential exists for a major increase because more than 10 million Americans meet the obesity criteria for bariatric surgery. If just 10 percent, or 1 million, underwent bariatric surgery, the cost would exceed $15 billion.

"In the past, when it came to making a decision about surgery, the surgeon's recommendation was considered paramount, and little consideration was given to the way patients "felt" about their decision," Goodney said. "But we now know that patients often have better outcomes when the decision about surgery is then shared between patient and physician. This report, and several others to follow, highlight the need for better decision aids to make this collaboration— the partnership between a surgeon and his or her patient—more effective."

The report on bariatric surgery is the first in a series of six Dartmouth Atlas reports that examine unwarranted variations in U.S. surgical care. Subsequent reports will look at surgical treatments for cerebral aneurysms, diabetes/peripheral artery disease, spinal stenosis, organ failure (transplantation)

and prostate cancer. Each report examines the underlying condition, the available treatment options before surgery, and the role of shared decision-making before surgery; the care during surgery including quality, risks, and costs; and the care after surgery, including hospital readmissions and ambulatory care.

“These reports identify significant opportunities to improve surgical care by highlighting unwarranted variation in the treatment of surgical conditions across the country," said Anne F. Weiss, MPP, team director at the Robert Wood Johnson Foundation, a longtime funder of the Dartmouth Atlas Project. “They also will help physicians, health care leaders and policymakers recognize where improvements in science have helped to limit variation and improve surgical care.”

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This report was produced by the Dartmouth Atlas Project, located at the Dartmouth Institute for Health Policy & Clinical Practice. The Dartmouth Atlas Project is principally funded by the Robert Wood Johnson Foundation, with support from a consortium of funders. This report received its major support from the Department of Surgery at Dartmouth-Hitchcock Medical Center. The full report, Variations in the Care of Surgical Conditions: Obesity, and complete data tables can be found at *www.dartmouthatlas.org.*

**About the Dartmouth Atlas Project**
For more than 20 years, the Dartmouth Atlas Project has documented glaring variations in how medical resources are distributed and used in the United States. The project uses Medicare data to provide information and analysis about national, regional, and local markets, as well as hospitals and their affiliated physicians. This research has helped policymakers, the media, health care analysts and others improve their understanding of our health care system and forms the foundation for many of the ongoing efforts to improve health and health systems across America.

**Methodology**
Bariatric surgery and rates of type II diabetes were measured for Medicare beneficiaries age 65 and over who were enrolled in Medicare Parts A and B on June 30 of each measurement year. Adult obesity rate were estimated using county-level data from the Centers for Disease Control and Prevention. Rates were aggregated to the level of the hospital referral region.