

January 3, 2012

Not Equal: Quality of Care, Cost for PAD Sufferers

Study of More Than 14,000 Medicare Patients With Peripheral Arterial Disease Helps Consumers Navigate Medical Provider and Treatment Choice

FAIRFAX, Va.—Although minimally invasive (endovascular) treatments for patients with peripheral arterial disease (PAD) result in shorter hospital stays and the potential to save Medicare millions of dollars each year, a new study reveals that the quality of care and cost depend on who's providing the treatment. The study, which appears in this month's *Journal of Vascular and Interventional Radiology*, is the first and largest study of its kind on these treatments for Medicare patients age 65 and older.

"Identifying quality health care and cost savings for treating a disease that affects millions of Americans is critical," said Marshall Hicks, M.D., FSIR, president-elect of the Society of Interventional Radiology, a national scientific organization of nearly 4,700 doctors, scientists and allied health professionals dedicated to improving health care through minimally invasive treatments. "This study can help consumers understand that different doctors get different outcomes for the same treatments—and that they have a choice," said Hicks, an interventional radiologist and head of the diagnostic imaging division at the University of Texas MD Anderson Cancer Center in Houston.

PAD is a common yet dangerous condition that affects an estimated 10 million people in the United States (12–20 percent of Americans over age 65) and can lead to heart attack or stroke. The vascular disease develops mostly as a result of atherosclerosis or hardening of the arteries, which occurs when cholesterol and scar tissue build up, forming plaque that narrows and clogs the arteries and slows blood flow to the legs.

Researchers in the study reviewed Medicare claims data from more than 14,000 patients with PAD over two years from Medicare's Standard Analytical Files, which present a large dataset that contains all services (physician, inpatient, and outpatient). The authors compared outcomes of percutaneous (procedures done through the skin) PAD treatments in Medicare patients according to the physician specialty type (interventional radiologist, interventional cardiologist, vascular surgeon) that provided the service and assessed mortality, transfusion, intensive care use, length of stay, and subsequent restoration of blood supply or amputation. Outcomes were compared using standard outcome prediction formulas adjusted for age, gender, race, emergency department admission and other existing conditions.

"We found that costs and provider care are not alike," said current society president Timothy P. Murphy, M.D., FSIR, a study co-author. "We noted that the adjusted average one-year procedure cost when performed by interventional radiologists was about \$17,640. That's a cost savings to Medicare of approximately \$1,000 per procedure—which means that in such a large population, treatments for PAD by interventional radiologists could potentially save taxpayers \$230 million each year. And the patient outcomes are better," said Murphy, an interventional radiologist and director of the Vascular Disease Research Center at Rhode Island Hospital in Providence.

Murphy noted data from the study provided strong evidence that treatment by interventional radiologists provides numerous benefits to the PAD patient, such as less risk of infection, less anesthesia, less pain and scarring, faster recovery and a quicker return to normal activities. "The Medicare data clearly show more transfusion and intensive care utilization, longer length of stay, more repeat procedures or amputations and higher costs when treatment is not performed by interventional radiologists," Murphy added.

PAD is a narrowing of the blood vessels in the leg, which limits the supply of oxygen and nutrients to the leg, causing pain and discomfort. The first line of defense for peripheral arterial disease is lifestyle changes, however; when this proves unsuccessful, other techniques including endovascular interventions (minimally invasive treatments where a physician uses image guidance to thread a very thin tube called a catheter through an artery in the groin to the blockage in the legs) may be performed. Options include using a small balloon or a tiny mesh tube called a stent, where the physician can open a blocked artery in a minimally invasive way through only a nick in the skin the size of a pencil tip. These interventions are performed by interventional radiologists, as well as by vascular surgeons and interventional cardiologists.

For more information about the Society of Interventional Radiology, peripheral arterial disease, minimally invasive treatments and the Journal of Vascular and Interventional Radiology, please visit online at www.SIRweb.org.

Besides Murphy, co-authors of "Lower Extremity Endovascular Interventions for Medicare Beneficiaries: Comparative Effectiveness as a Function of Provider Specialty" include Abdul Mueed Zafar, M.D., University of Texas Health Sciences Center, San Antonio; Rajoo Dhangana, M.D., department of diagnostic imaging, Rhode Island Hospital, Brown University, Providence; Scott C. Goodwin, M.D., FSIR, department of radiology, University of California, Irvine; Richard Duszak Jr., M.D., FSIR, Baptist Memorial Hospital, Mid-South Imaging and Therapeutics, Memphis, Tenn.; Charles E. Ray Jr., M.D., Ph.D., FSIR, division of interventional radiology, University of Colorado, Aurora; and Nikolay E. Manolov, Ph.D., Lewin Group, Falls Church, Va.

###

About the Society of Interventional Radiology

Interventional radiologists are highly trained, board-certified doctors who specialize in minimally invasive, targeted treatments. Following four years of medical school and a year of internship, interventional radiologists then spend four years studying radiology and another year in an interventional radiology fellowship training program focused on minimally invasive, targeted treatments performed using imaging for guidance and patient care. This specialty training is recognized by the Certificate of Added Qualifications in Vascular and Interventional Radiology, which is awarded by the American Board of Radiology on completion of an oral examination.

Interventional radiologists offer the most in-depth knowledge of the least invasive treatments available coupled with diagnostic and clinical experience across all specialties. They use X-ray, MRI and other imaging to advance a catheter in the body, such as in an artery, to treat at the source of the disease internally. As the inventors of angioplasty and the catheter-delivered stent, which were first used in the legs to treat peripheral arterial disease, interventional radiologists pioneered minimally invasive modern medicine. Today, interventional oncology is a growing specialty area of interventional radiology. Interventional radiologists can deliver treatments for cancer directly to the tumor without significant side effects or damage to nearby normal tissue. Many conditions that once required surgery can be treated less invasively by interventional radiologists. Interventional radiology treatments offer less risk, less pain and less recovery time compared to open surgery. Visit www.SIRweb.org.

Reporters: To obtain a copy of this article or arrange local interviews, please contact Ellen Acconcia, SIR communications manager/practice areas, eacconcia@SIRweb.org, (703) 460-5582, or Maryann Verrillo, SIR director of communications and public relations, mverrillo@SIRweb.org, (703) 460-5572.