

Media Contacts:

Annmarie Christensen
(603) 653-0897

annmarie.christensen@dartmouth.edu

Rebecca Porterfield
(202) 683-3202

rebecca.porterfield@mslgroup.com

Regional Rates of Prostate Cancer Screening Vary by a Factor of Fifteen

Shared decision-making will inform individualized treatment and lead to standardization of care

Lebanon, N.H. (December 3, 2014) – The likelihood that an older man will undergo controversial screening for prostate cancer largely depends on where he lives, with men in some regions in the U.S. 15 times more likely to get prostate specific antigen (PSA) screening tests than in others, according to a new report from the Dartmouth Atlas Project.

The report, which reflects 2010 data, offers additional evidence of the confused state of prostate cancer screening in advance of the United States Preventive Services Task Force’s (USPSTF) 2012 recommendation against PSA screening for adult men of all ages.

The study of male Medicare beneficiaries, age 68-74, found the national average rate of PSA testing was 34.5 percent. The regional rates varied widely, from a low of 3.6 percent in Lebanon, N.H., to a high of 58.4 percent in Miami, Fla. Areas with rates under 10 percent included Mason City, Iowa; Burlington, Vt.; Minot, N.D.; and Binghamton, N.Y. By contrast, more than 50 percent of men were screened in Wilmington, N.C.; Sun City, Ariz.; Paterson, N.J.; and McAllen, Texas.

The inconsistency in screening is mirrored by regional variation in the rate of new diagnoses of prostate cancer. This varies more than twelvefold, even after adjusting for race and age. The national average rate of diagnosis among Medicare beneficiaries was 7.4 per 1,000 men, but, among 306 hospital referral regions the report looked at, the discrepancies were significant, from 1.8 per 1,000 in Longview, Texas to 24.7 per 1,000 in Minot, North Dakota.

The report also points to discrepancies in treatment, which include surgery and radiation. For instance, the use of surgery to treat men, ages 75 and younger, with prostate cancer varied nearly eightfold among regions from 2007 to 2012, from 54.8 in Ocala, Fla., to 479.5 in Munster, Ind. Patients older than 75 are less likely to undergo surgery due to the potential for other medical issues, and black patients are less likely to receive surgery or treatment overall.

“Screening and treatment for prostate cancer depend tremendously on where a patient lives,” said Elias S. Hyams, M.D., a report co-author. “The wide variation demonstrates that there is, most likely, over-screening and under-screening, as well as over-treatment and under-treatment. This reflects the lack of a definitive standard of care for diagnosis and treatment. With a disease like prostate cancer, individualized treatment is critical. This is where clear and consistent shared decision-making between physicians and patients comes in – to find the appropriate, individualized care for patients.”

Shared decision-making is a collaborative process that allows patients and their providers to make health care treatment decisions together, taking into account the best scientific evidence available, as well as the patient's values and preferences.

In 2013, approximately 240,000 men were diagnosed with prostate cancer in the United States, and about 30,000 men died from this condition. The death rate from prostate cancer has gradually decreased in the last 20 years, from 38.6 to 21.8 deaths per 100,000 men from 1990 to 2010. Reasons for this lower death rate are thought to include the effects of screening, as well as the development of more effective treatments. While prostate cancer remains the second leading cause of cancer-related death in men in the United States, most men die with prostate cancer, not because of it. Notably, black patients are at increased risk of diagnosis and death from prostate cancer.

Hyams co-authored the report 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.

The controversy over PSA testing arises from several factors, including its utility, and the risks and benefits of the treatment that can follow. While elevated PSA levels indicate higher risk of serious cancer, most cancers detected by PSA screening are at an early stage and non-aggressive. The test cannot differentiate.

Research indicates screening does “save lives”— about one life for every 1,000 men screened. However, of these 1,000 men, 30 to 40 will develop erectile dysfunction or urinary incontinence, two will experience a serious cardiovascular event, and one will develop a serious blood clot due to treatment. For both patients and physicians, it is not clear how best to reconcile the competing interests of detecting dangerous cancer, while not causing needless worry, as well as potential harm from biopsy and treatment. For these reasons, there is a growing consensus that traditional, systematic screening of asymptomatic men causes more harm than good.

The American Urological Association recommends shared-decision making about PSA screening for men 55-69 years old. The American Cancer Society recommends that, starting at age 50, men should discuss pros and cons of PSA testing with their doctors, and, further, if a patient is African-American or has a father or brother diagnosed with prostate cancer before age 65, this conversation should occur at age 45.

“The results presented here cry out for an analysis of time trends and correlations,” Michael J. Barry, M.D., president of the Informed Medical Decisions Foundation and professor of medicine at Harvard Medical School, writes in a commentary in the report. “Are PSA testing rates dropping among 65-74 year olds? Does screening appear to drive incidence and treatment? The finding that Minot, North Dakota, has a low PSA testing rate, but a high incidence rate is a curious finding that deserves further exploration.”

The report, called “[Variation in the Care of Surgical Conditions: Prostate Cancer](#),” is the last of six reports from the Dartmouth Atlas of Health Care examining unwarranted variations in the surgical care of Medicare beneficiaries. Previous reports on [end-stage renal disease](#), [spinal](#)

[stenosis](#), [obesity](#), and [cerebral aneurysms](#) pointed out regional and, in the case of [diabetes](#), racial disparities, focusing on the importance of shared decision-making.

###

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, Variation in the Care of Surgical Conditions: Prostate Cancer, 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

We examined the rates of PSA testing, prostate cancer incidence, surgical and nonsurgical treatments for prostate cancer, and outcomes following surgical treatment at the level of the hospital referral region (HRR). To accomplish this, we studied all patients with evidence of diagnostic codes for prostate cancer and examined whether they had undergone any of the following treatment options: prostatectomy, radiation therapy, hormone therapy or no treatment/delayed treatment. Additionally, we examined variation in treatment for beneficiaries age 75 and under and over age 75, black and non-black beneficiaries, and beneficiaries with two or more chronic conditions to show the prevalence of selected treatments by age, race, and comorbidity status. After defining the rates over time, we assessed differences in readmissions following prostatectomy.