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**More Primary Care Associated with Positive Health Outcomes
for Medicare Patients**

JAMA Study Introduces New Measure of the Primary Care Workforce

Lebanon, N.H. (May 25, 2011) – Medicare patients living in areas with higher levels of practicing primary care physicians have lower death rates and make fewer trips to the hospital for preventable conditions, according to a new study by Dartmouth investigators published today in the *Journal of the American Medical Association*.

In 2007, more than one-fourth of ambulatory care visits to office-based general internists and family physicians were for patients aged 65 years or older, according to the National Ambulatory Medical Care Survey. In the *JAMA* study, supported in part by the Dartmouth Atlas Project, researchers sought to determine the association between the adult primary care physician workforce – the number of physicians available for a given population in an area – and individual Medicare patient outcomes.

The study's findings suggest that a larger local workforce of primary care physicians has a positive benefit for Medicare patients, but that this association may not simply be the result of having more physicians in an area who are trained in primary care. Instead, the benefits of the primary care workforce may be more from the amount of ambulatory clinical care provided, rather than the number of primary care physicians locally available.

Medicare patients living in areas with a higher level of adult primary care physicians per population had modestly lower mortality and fewer hospitalizations for what are known as ambulatory care sensitive condition (ACSC) hospitalizations. ACSC hospitalizations are regarded as largely preventable with proper primary or other ambulatory (outpatient) care. However, the associations were much stronger with a measure of an area's primary care activity that was based on the amount of care delivered in an office or clinic setting by primary physicians. The difference is important because not all doctors trained in primary care work in ambulatory settings; for instance, some work in emergency departments or as hospitalists.

"Current measures miscount many physicians as practicing primary care when they provide little or no ambulatory primary care. Increasing the training capacity of family medicine and internal medicine may have disappointing patient benefits if the resulting physicians are primary care in name only," said Chiang-Hua Chang, Ph.D., lead report author and Dartmouth Atlas Project researcher.

Medicare patients living in areas with the highest amount of primary care delivered to patients by physicians trained in primary care had 5 percent lower mortality, 9 percent fewer ACSC hospitalizations and 1 percent higher total Medicare program spending. The adjusted rates of the

highest and lowest areas were 5.19 vs. 5.49 deaths per 100 patients, 72.53 vs. 79.48 ACSC hospitalizations per 1,000 patients, and \$8,857 vs. \$8,769 total Medicare spending per patient.

Previous studies have used the American Medical Association (AMA) Masterfile to measure the physician workforce. However, results from this study suggest that the AMA Masterfile, the most widely used physician workforce data source, may not accurately reflect the proportion of primary care trained physicians actually providing ambulatory primary care. This is because physicians may be counted as primary care according to their self-designated specialty on the AMA Masterfile, but not practice in an ambulatory setting.

To address this in the study, researchers introduced a new measure of the primary care workforce derived from Medicare claims to test hypotheses that high levels of primary care physician workforce are associated with lower mortality, fewer ACSC hospitalizations and lower spending. Researchers differentiated areas where physicians are providing ambulatory primary care in an office setting from areas with higher numbers of physicians that while trained in primary care, according to Medicare office- and clinic-based claims, are not practicing clinicians.

Strengthening the role of primary care is a key element in most proposals to improve the outcomes and efficiency of U.S. health care delivery. Current policy proposals to strengthen primary care in the health care system have been directed toward two objectives: to reinvigorate the role of primary care in the coordination of care and to increase the training of primary care clinicians. Patient-centered medical homes and accountable care organizations, for example, cannot function without an adequate level of primary care clinicians.

“Despite a widespread interest, the relationship of the primary care physician workforce to patient-level outcomes remains poorly understood. This study offers a cautionary note that having more physicians trained in primary care practicing in an area, by itself, does not ensure substantially lower mortality, fewer hospitalizations or lower costs,” said David C. Goodman, M.D., M.S., report author and co-principal investigator of the Dartmouth Atlas Project.

An abstract of the *JAMA* study, “Primary Care Physician Workforce and Medicare Beneficiaries’ Health Outcomes,” can be found at <http://jama.ama-assn.org/content/305/20/2096.short>. Additional report authors include Therese A. Stukel, Ph.D. and Ann Barry Flood, Ph.D.

The Dartmouth Atlas Project is run by the Dartmouth Institute for Health Policy and Clinical Practice and principally funded by the Robert Wood Johnson Foundation.

Report Methodology

The study used a 20 percent sample of fee-for-service Medicare beneficiaries aged 65 to 99 years and analyzed 100 percent of their physician and hospital claims. Beneficiaries were included if they had Part A and Part B coverage in 2007 and individual-level adjustment included age, sex, race and illness level. The study used two measures of adult primary care physicians across Primary Care Service Areas: the American Medical Association (AMA) Masterfile and full-time equivalents (FTEs), a workforce measure that is an estimate of the ambulatory clinical care and obtained from Medicare claims.

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.