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Prescription Drug Use among Medicare Patients Highly Inconsistent

First-ever Dartmouth Atlas report on prescriptions finds wide variation in the use of both effective and potentially harmful medications across U.S.

Lebanon, N.H. (October 15, 2013) – A [new report](#) from the [Dartmouth Atlas Project](#) shows that the use of both effective and risky drug therapies by Medicare patients varies widely across U.S. regions, offering further evidence that location is a key determinant in the quality and cost of the medical care that patients receive.

In their first look at prescription drug use, Dartmouth researchers also find that the health status of a region's Medicare population accounts for less than a third of the variation in total prescription drug use, and that higher spending is not related to higher use of proven drug therapies. The study raises questions about whether regional practice culture explains differences in the quality and quantity of prescription drug use.

"There is no good reason why heart attack victims living in Ogden, Utah, are twice as likely to receive medicine to lower their cholesterol and their risk of another heart attack than those in Abilene, Texas, but this inconsistency reflects the current practice of medicine in the United States," said Jeffrey C. Munson, M.D., M.S.C.E., lead author and assistant professor at The Dartmouth Institute for Health Policy & Clinical Practice.

"This report demonstrates how far we still have to go as a nation to make sure people get the care they need when they need it," said Katherine Hempstead, Ph.D., M.A., senior program officer at the Robert Wood Johnson Foundation, a longtime funder of the Dartmouth Atlas Project. "Instead of varying widely, patterns of care should be nearly uniform across the country for non-controversial drug therapies with a strong evidence for their use."

The new report offers an in-depth look at how prescription drugs are used by Medicare beneficiaries in the program's Part D drug benefit, which had 37 million enrollees in 2012. The report separates the country into 306 regional health care markets and examines variations among them in the quantity and quality of prescription drug use, spending, and use of brand name drugs. To examine the quality of care, the report looks at prescription use in three categories:

- Drug therapies proven to be effective for patients who have suffered heart attacks, have diabetes, or have broken a bone;
- Discretionary medications, which have less clear benefits, but may be effective for some patients who take them; and
- Potentially harmful medications, for which risks generally outweigh benefits.

“We need to learn from regions that consistently provide high-quality care, and focus attention on regions that appear to offer the worst of both worlds: high-risk and discretionary medications and, in relative terms, low use of effective drug therapies,” said Nancy Morden, M.D., M.P.H., report co-author and associate professor at The Dartmouth Institute for Health Policy & Clinical Practice. “This will help us understand and ultimately improve prescribing quality for all Medicare beneficiaries.”

Total use of prescription medications

The average Medicare Part D patient filled 49 standardized 30-day prescriptions in 2010. At the high end, patients in Miami, filled an average of 63 prescriptions, compared to patients in Grand Junction, Colo., who filled 39 prescriptions per year. Other high-use regions included Lexington, Ky., (59 prescriptions) and Huntington, W.Va., (58), compared to low-use regions in Albuquerque, N.M., (40) and San Mateo County, Calif. (41).

Use of effective prescription care

The report examines the use of proven drug therapies, including the use of beta blockers and statins in the months after a heart attack and the use of osteoporosis drugs after bone fractures.

Nearly eight in 10 heart attack survivors (78.5%) filled at least one prescription for a beta blocker in the seven to 12 months following a hospital discharge in 2008 or 2009. The results ranged from San Angelo, Texas, (91.4%) to Salem, Ore., (62.5%). The pattern of statin use after a heart attack was similar to that of beta blocker use, with 72 percent of heart attack survivors filling a statin prescription in the second six months after leaving the hospital. The results for statin use ranged from a high in Ogden, Utah, (91.3%) to a low in Abilene, Texas (44.3%). The regions that excelled in beta blocker use did not necessarily achieve similar results with statin therapy, despite the fact that both beta blocker therapy and strict control of cholesterol levels are recommended by the National Committee for Quality Assurance (NCQA) for the same condition in the same patients. No single region was in the top 10 regions for highest rates of use for both measures.

NCQA also recommends that survivors of a fracture resulting from osteoporosis should receive drugs that reduce the risk of subsequent fractures. However, only 14.3 percent of fragility fracture survivors received a drug to combat osteoporosis within six months of their fracture. The use of osteoporosis drugs across regions ranged from Honolulu, Hawaii, (28%) to Newark, N.J. (6.8%).

Use of potentially harmful medications

More than one in four Medicare Part D beneficiaries (26.6%) filled at least one prescription in 2010 for medications that have been identified as high-risk for patients over age 65, such as skeletal muscle relaxants, long-acting benzodiazepines, and highly sedating antihistamines. Patients in Alexandria, La., (43%) were more than three times as likely to receive at least one high-risk medication as patients in Rochester, Minn. (14%). More than 6 percent of Medicare patients filled a prescription for two or more different high-risk medications, including 14.6 percent of patients in Alexandria, La.

Total prescription drug spending

Spending on prescriptions by the Part D drug plans and their patients totaled \$2,670 per beneficiary. Spending varied nearly threefold across regions, with a \$2,968 difference between the

lowest-spending region—St. Cloud, Minn. (\$1,770)—and the highest spending region, Miami (\$4,738).

Prescriptions filled with brand name products

When available, generic medications are generally equally effective and less costly than their brand-name counterparts. Thus, the relative use of brand-name products offers one view of prescribing efficiency. Overall, 26.3 percent of prescriptions were filled as a brand-name product in 2010. Patients in Manhattan (36%) were more than twice as likely to fill a prescription for a brand-name product than patients in La Crosse, Wis. (16.5%).

The full report, [The Dartmouth Atlas of Medicare Prescription Drug Use](#), and [complete data tables](#) can be found at www.dartmouthatlas.org.

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Methodology

Overall prescription drug use, spending for prescription drugs, and the use of brand-name medications were measured for Medicare beneficiaries age 65 and over who were continuously enrolled in a stand-alone Part D plan in 2010 (based on a 40% random sample). High-risk and discretionary medication use were also measured in this population. High-risk medications examined were those identified by NCQA as generally conferring more risk than benefit in older people. Discretionary medications were defined as those commonly prescribed in situations with higher diagnostic and therapeutic uncertainty. Effective prescription drug use measures were based on widely accepted, evidence-based prescribing guidelines. Effective drug use was studied for three groups of Part D beneficiaries: patients who had a heart attack, patients ages 65-75 with treated diabetes, and patients with a fragility fracture (a fracture of the hip, wrist, or shoulder commonly resulting from osteoporosis). For some effective care measures, earlier years were included in order to increase the sample size to allow for more accurate estimation of utilization in disease-specific cohorts.

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.

About the Robert Wood Johnson Foundation

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