

PROFESSION

Patient location and condition signal odds of drug compliance

■ Pharmacy data show great variations in the rates at which people stick to drug regimens for diabetes, depression and other illnesses.

By KEVIN B. O'REILLY ([HTTP://WWW.AMEDNEWS.COM/APPS/PBCS.DLL/PERSONALIA?ID=KOREILLY](http://WWW.AMEDNEWS.COM/APPS/PBCS.DLL/PERSONALIA?ID=KOREILLY)) amednews staff — Posted July 22, 2013

The degree to which Americans with chronic conditions take their medications as prescribed differs widely according to the state where they live, the conditions they have and their type of insurance coverage.

Those are the findings of a recent report based on 2012 data from the 60 million customers of CVS Caremark Corp.'s pharmacy benefit management program, which serves consumers covered by self-insured employers, private health plans and Medicare Part D. The CVS report breaks down drug adherence by state, condition and coverage on metrics such as medication possession ratio, which is based on dispensing records to show what percentage of a yearlong period patients had their prescriptions on hand to take.

The data show wide variations in drug adherence across the country. For example, privately insured patients with diabetes in Maine have their prescribed medications on hand 84% of the time — the highest rate in the country. Meanwhile, their counterparts in Alaska had the lowest compliance rate, 60%. Similar variations of 20 to 25 percentage points were found in the other three conditions examined in the report, released in late June.

Patients with depression generally had the lowest rates of adherence, compared with patients who were prescribed medication for hypertension, hyperlipidemia and diabetes, the report's authors said. Patients with hypertension did the best job of sticking to their drug regimens. Among insurance plan types, Medicare patients generally were the most diligent about taking their medications, which experts said may come as a surprise given that the typical senior patient is prescribed 10 to 12 drugs.

"People on Part D plans do have a little more time to spend thinking about these issues, and it could be that our outreach has been better in addressing them," said Troyen A. Brennan, MD, MPH, CVS Caremark's chief medical officer.

Experts define an 80% medication possession ratio as optimal in terms of ensuring that patients are able to get the adequate clinical effect from their medicines. The report found similarly big gaps in the overall rates of adherence according to that definition. Maine, again, was first on this metric, with 78% of patients having their meds on hand for 80% or more of the time. Meanwhile, Alaska once more pulled up the rear in overall compliance rates for privately insured patients, with just 35% of patients meeting this definition of optimal adherence.

Drug noncompliance not only contributes to worse health outcomes, but raises costs. If every one of the patients with diabetes, hypertension, hyperlipidemia or depression enrolled in the CVS PBM improved adherence to optimal levels, that would help avert as much as \$6.5 billion in spending due to potentially avoidable hospitalizations, physician visits and diagnostic testing, the report said. The CVS cost figure is far higher than earlier estimates, such as a 2009 report from the NEHI — a think tank in Cambridge, Mass. — that tabbed the avoidable expenses linked to noncompliance at \$300 million annually.

The potential for big savings is undeniable, Dr. Brennan said.

"There are not many places where there's a silver bullet in health care, which is better quality and lower cost, but adherence to medication is definitely one of those."

Pharmacist involvement yields slim success

The central question is how to make a significant dent in drug noncompliance, a puzzle that has challenged physicians, pharmacists and researchers for years. CVS recently launched a program that offers extra pharmacist attention for patients with diabetes and other chronic conditions. The pharmacists are alerted when patients are noncompliant. These patients get face-to-face educational information from pharmacists as well as postal mail or email reminders with additional resources such as disease-management programs in the area. The pharmacists also communicate with the patients' doctors about the apparent nonadherence.

Yet, the program has shown a limited effect so far. A January 2012 *Health Affairs* study of the program's work with 5,123 diabetic patients found that they had a 2.1% higher rate of drug compliance compared with nearly 25,000 similar patients who got the usual care.

Removing the cost barrier to drugs also appears to have a modest impact. A nationwide randomized trial of 2,900 recent heart attack patients insured by Aetna found that those with no co-pay for their cardiovascular medications were 13% likelier to take their drugs than similar patients with the usual out-of-pocket costs. Yet overall adherence rates were still below 50% for both groups, said the study, published in the Dec. 1, 2011, issue of *The New England Journal of Medicine*.



Dr. Brennan

DID YOU KNOW:
Maine has the highest overall medication compliance rate in the U.S. for privately insured patients; Alaska, the lowest.

Earlier research has found that time-squeezed physicians have trouble spotting noncompliant patients, educating them about the impact of adherence on outcomes and helping them overcome barriers such as high out-of-pocket costs and low health literacy. At a National Press Club panel held in June to discuss nonadherence, experts noted that payers often do not reward physicians for the extra efforts that are needed to boost compliance.

“There's no meaningful reimbursement for them on the basis of whether or not their patients are taking their meds,” said William H. Shrunk, MD, MSHS, assistant clinical professor of medicine in the Division of Pharmacoepidemiology and Pharmacoeconomics at Brigham and Women's Hospital in Boston.

Too often, physicians remain in the dark about whether their patients are continuing to take the prescribed medications. For example, the CVS report found wide state-by-state gaps in how often patients refill medications after the first time they get a bottle to take home. This metric, dubbed the first fill persistency rate, was 76% for privately insured diabetics in West Virginia — the highest in the nation. By contrast, only 47% of these kinds of patients went back to get a refill after their first supply of diabetes drugs ran out in Wyoming, the state with the worst rate in this area.

“We're trying to get doctors to be aware that even though they put a patient on a medication, that the patient never filled the medication or is not continuing to fill it,” Dr. Brennan said. “We're working on ways to get the information to doctors through websites or through EMRs so that they can get an accurate picture of what's going on after the patient goes to the pharmacy.”

Earlier research has found that a quarter of prescriptions never get filled and that a third of patients with chronic conditions stop taking their prescribed medication before the first refill is due. Meanwhile, about half of all patients taking a maintenance medication for a chronic condition stop taking it within a year after starting it.

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ADDITIONAL INFORMATION

How drug adherence varies by state

A recent report based on data drawn from about 60 million members of CVS Caremark's pharmacy benefit management program shows considerable regional variation in medication compliance, defined here as the share of privately insured patients who have their prescribed medications on hand at least 80% of the time.

State	% adherent
Maine	78.0%
Pennsylvania	76.6%
Maryland	75.3%
New Hampshire	75.2%
West Virginia	68.5%
Massachusetts	68.2%
New York	66.9%
Virginia	66.6%
New Jersey	66.4%
Vermont	65.0%
Connecticut	64.7%
Delaware	63.0%
Illinois	62.6%
Tennessee	62.4%
Montana	62.3%
Florida	61.6%
Indiana	61.2%
South Dakota	61.1%
Kansas	60.9%
Ohio	60.9%
Oregon	59.9%
Nebraska	59.5%

South Carolina	59.3%
Minnesota	59.2%
Kentucky	58.5%
Nevada	58.2%
Missouri	58.0%
Hawaii	57.6%
Wisconsin	57.5%
California	57.4%
Iowa	57.1%
Arkansas	57.0%
Georgia	57.0%
Louisiana	56.9%
Rhode Island	56.7%
Michigan	56.2%
North Carolina	55.8%
Washington	54.8%
Alabama	54.6%
Mississippi	54.4%
Idaho	54.2%
Arizona	53.2%
North Dakota	52.8%
Texas	51.9%
Oklahoma	51.6%
Colorado	51.5%
Utah	51.5%
New Mexico	46.3%
Wyoming	40.1%
Alaska	34.5%

Source: "2013 State of the States: Adherence Report," CVS Caremark Pharmacy Care Research Institute, June ([link](#)). More detailed breakdowns by condition and market segment are available on the CVS website ([link](#)).

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EXTERNAL LINKS

"An Integrated Pharmacy-Based Program Improved Medication Prescription And Adherence Rates In Diabetes Patients," *Health Affairs*, January 2012 ([link](http://content.healthaffairs.org/content/31/1/120.abstract?sid=f150b1db-6e64-451b-91e0-f7036edf08c7): <http://content.healthaffairs.org/content/31/1/120.abstract?sid=f150b1db-6e64-451b-91e0-f7036edf08c7>)

"Full coverage for preventive medications after myocardial infarction," *The New England Journal of Medicine*, Dec. 1, 2011 ([link](#): <http://www.ncbi.nlm.nih.gov/pubmed/22080794/>)

"Thinking Outside the Pillbox: A System-wide Approach to Improving Patient Medication Adherence for Chronic Disease," NEHI, Aug. 12, 2009 ([link](#): http://www.nehi.net/publications/44/thinking_outside_the_pillbox_a_systemwide_approach_to_improving_patient_medication_adherence_for_chronic_disease)

"2013 State of the States: Adherence Report," CVS Caremark Pharmacy Care Research Institute, June ([link](#): http://www.cvsicaremarkfyi.com/sites/default/files/SOS-Adherence-Report-2013_Final.pdf)

Interactive view of state-by-state CVS data on medication adherence, June ([link](#): <http://www.cvsicaremarkfyi.com/adherence/2013-state-of-the-states>)

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