Economic effect of an expansion of pharmacy benefits on total health care expenditures by a state Medicaid program

Tara L. Jenkins, Donald L. Harrison, Elgene W. Jacobs, Barbara R. Neas, and Tracy M. Hagemann

Abstract

Objectives: To evaluate the economic effect of a pharmacy benefit expansion on a population of Oklahoma Medicaid recipients and to determine whether recipients who routinely maximized their monthly prescription limit (cap) before the benefit expansion benefited more from the expansion than the remainder of the study population.

Design: Retrospective study.

Setting: Oklahoma Medicaid claims data from January 1, 2003, to December 31, 2004.

Patients: Data from 15,936 Oklahoma Medicaid recipients.

Intervention: Retrospective administrative analysis using the Oklahoma Health Care Authority pharmacy and medical claims databases.

Main outcome measures: Total health care expenditures per recipient per year, total medical expenditures per recipient per year, and total pharmacy expenditures per recipient per year.

Results: Total health care expenditures increased 17% after the benefit expansion ($P < 0.0001$). Of this increase, 65% was attributed to pharmacy expenditures and 35% to medical expenditures. However, a subpopulation of recipients who routinely reached their prescription limit before the expansion had a statistically significant increase in total and pharmacy expenditures; a statistically significant increase in medical expenditures was not observed.

Conclusion: Although total health care expenditures increased after a monthly pharmacy benefit in a Medicaid population was expanded, a subpopulation of recipients identified as high pharmacy users before the expansion did not have a statistically significant increase in medical expenditures, whereas those who were non–high users experienced a significant increase. Additionally, this subpopulation experienced a nonsignificant decrease in hospital expenditures. These results could suggest that this subpopulation was affected differently than the overall population by the expansion of the Medicaid pharmacy benefit.

Keywords: Medicaid, pharmacy claims data, databases, drug costs and expenditures, pharmacy services.

J Am Pharm Assoc. 2009;49:744–750.
doi: 10.1331/JAPhA.2009.08112

Received April 3, 2008, and in revised form March 2, 2009. Accepted for publication March 7, 2009.

Tara L. Jenkins, PhD, was a graduate student, College of Pharmacy, University of Oklahoma, Oklahoma City, at the time this study was conducted; she is currently Assistant Professor, Department of Pharmacy Practice, School of Pharmacy, University of Kansas, Kansas City. **Donald L. Harrison, PhD,** is Associate Professor, Department of Pharmacy: Clinical & Administrative Sciences; **Elgene W. Jacobs, PhD,** is Associate Professor, Department of Pharmacy: Clinical & Administrative Sciences; **Barbara R. Neas, PhD,** is Professor, Department of Epidemiology and Biostatistics; and **Tracy M. Hagemann, PharmD,** is Associate Professor, Department of Pharmacy: Clinical & Administrative Sciences, University of Oklahoma, Oklahoma City.

Correspondence: Tara L. Jenkins, PhD, Department of Pharmacy Practice, School of Pharmacy, University of Kansas, 3901 Rainbow Blvd., MS 4047, Room B440, Kansas City, KS 66160. Fax: 913-588-2355. E-mail: tjenkins@kumc.edu

Disclosure: The authors declare no conflicts of interest or financial interests in any product or service mentioned in this article, including grants, employment, gifts, stock holdings, or honoraria.

Previous presentation: American Pharmacists Association Annual Meeting, March 13–18, 2008, San Diego, CA.

Prescription medication coverage has been one of the fastest growing health expenditures for Medicaid programs. Expenditures for pharmaceuticals increased at more than twice the rate of total Medicaid spending from 1997 to 2001. In 2001, at almost $20 billion, prescription medication expenditures were 9% of the total Medicaid budget. By 2003, prescription expenditures for Medicaid jumped to $33.7 billion.[1] In a 2003 survey by the Kaiser Family Foundation, 36 states mentioned pharmaceuticals as the primary driver of Medicaid costs, while another 12 states listed increasing medication costs as one of the top three factors contributing to expenditure growth.[2]

Many cost-containment strategies have been used by states in an attempt to slow these quickly rising expenditures. States have limited the number of prescriptions authorized per recipient per a specified time period, quantity of medication, number of refills per prescription, or frequency of dispensing (early refill rejections).[2] Nearly every state responding to a survey indicated use of at least one of these strategies while limiting the amount of medication that can be dispensed per prescription.[3]

At a Glance

Synopsis: Retrospective analysis of claims data for 15,936 Oklahoma Medicaid recipients was performed to evaluate the economic effect of a pharmacy benefit expansion and to determine whether recipients who routinely maximized their monthly prescription limit (cap) before the benefit expansion benefited more from the expansion than the remainder of the study population. Total health care expenditures increased 17% after the benefit expansion ($P < 0.0001$); 65% of this increase was attributed to pharmacy expenditures and 35% to medical expenditures. Recipients identified as high pharmacy users before the expansion did not have a statistically significant increase in medical expenditures, whereas those who were non–high users experienced a significant increase.

Analysis: *From an economic perspective, providing additional medications to beneficiaries who routinely maximized their pharmacy benefit prior to the expansion of a pharmacy benefit appears to have benefited the Oklahoma Medicaid program. These results are important because increasing expenditures in Medicaid programs have been a national concern in recent years, and slowing this growth is critical. One potential explanation for non–high users increasing their use after the policy change is moral hazard: the recipients, knowing that they could have more prescriptions paid for by the Medicaid program, could have opted to get medications that they would not have sought if the limit was tighter. This increase in demand for new prescriptions also could have led to an increase in doctor visits.*

Approximately one-third of the states use a prescription cap. A prescription cap is a limit on the number of prescriptions filled per recipient during a specified time period. The implementation of a prescription cap has been associated with a considerable reduction in pharmaceutical expenditures, but research on total health care expenditures has shown that the decrease in expenditures coincides with a larger reciprocal increase in other medical expenditures.[4–8]

A study conducted by Schulz et al.[9] examined how some Medicaid recipients cope with the consequences of exceeding their prescription cap limit. The researchers noted that the decisions made by the interviewees were not always medically prudent. Additionally, the burden of the prescription cap seemed to be forcing some Medicaid recipients into nonadherence with their medication therapies. Although not analyzed in their study, the authors suggested that the use of the prescription cap, while cutting medication expenditure costs, might adversely affect the health of Medicaid recipients, thus leading to additional use of other medical services and shifting the burden of cost to other facets of the health care system.[9]

Several studies by Soumerai and colleagues[4–8] also reported medication caps inadvertently creating additional health care expense outside of the pharmaceutical expenditure arena. Four years of Medicaid claims data from New Hampshire (dating from the early 1980s) were reviewed. In the early 1980s, New Hampshire instituted a three-prescription-per-month cap for Medicaid recipients, but the cap only remained in place for 11 months. Soumerai and colleagues analyzed 48 months of data to determine whether the medication cap affected recipient medication use while also leading to an increase in other health services. As a result of the medication cap, New Hampshire saved approximately $400,000 in medication expenditures.[4] These findings showed a sustained reduction in the number of prescriptions filled after the cap was implemented. However, although the state saved money on prescription expenditures, the savings were more than offset by increased nursing home admissions, visits to community mental health services, and the use of emergency mental health services.[5–7]

Although these studies and others have described the economic impact of reducing pharmacy benefits in a Medicaid population, a lack of published research exists evaluating the effect of expanding pharmacy benefits in a Medicaid population. In January 2004, the Oklahoma Medicaid program implemented a pharmacy benefit expansion, increasing their prescription cap from three to six prescriptions per recipient per month. A caveat to the increase in monthly prescriptions was that a maximum of three of the prescriptions could be brand-name medications.

Objectives

The objective of the study was to examine total health care expenditures, as well as pharmacy and medical expenditures, before and after expanding pharmacy benefits in an Oklahoma Medicaid population. Additionally, a policy gradient analysis was performed to determine whether recipients who routinely maximized their monthly prescription limit (cap) before the benefit expansion benefited more from the expansion than the