

## Medicare Myopia: The Case Against Increasing Ambulatory Copayments for the Elderly

Trivedi AN, Moloo H, Mor M. Increased ambulatory care copayments and hospitalizations among the elderly. *N Engl J Med* 2010;362:320–8.

### Study Overview

**Objective.** To examine the impact of increased Medicare ambulatory care copayments on inpatient and outpatient service utilization by the elderly.

**Design.** Quasi-experimental study.

**Setting and participants.** The authors analyzed benefits for 172 Medicare plans with greater than 1 year of participation in Medicare. From the original sample, a total of 18 Medicare case plans that raised copayments for ambulatory care between 2001 and 2006 were matched with 18 control plans that did not increase copayments during the same time period. The case plans were matched with controls by census region, tax status, and model type. Individual-level data from the Medicare Healthcare Effectiveness Data and Information Set (HEDIS) were matched with the Medicare enrollment file to determine enrollee demographic characteristics.

**Main outcome measures.** The investigators compared the total number of outpatient visits as well as 3 measures of inpatient hospital care utilization: number of annual inpatient admissions, number of inpatient days, and the probability of any use of inpatient care. The primary independent variable indicated whether copayments for ambulatory care increased or stayed the same within the period of study. Individual and group covariates included age, gender, ethnicity, proportion of elderly living in the census region, regional poverty level, education, and year of measurement. The authors estimated difference-in-differences (DD) effects to assess the impact of increased copayments on ambulatory care utilization among beneficiaries. They measured separate DD effects for subjects who were continuously enrolled and were compared to those subjects who exited the plan. Further, they looked at DD effects for continuously enrolled subjects stratified by area-level income, education, ethnicity, and chronic condition (hypertension, myocardial infarction, and diabetes). They undertook additional sensitivity analyses looking at utilization in the 2 years prior to when copayments for ambulatory care were increased and in all plans with more than 2 years in Medicare.

**Main results.** The authors abstracted a total of 1,522,067 observations for 899,060 beneficiaries who were enrolled in Medicare from 2001 to 2006. At baseline, the mean copayment in the case plans was \$7.38 for primary care and \$12.66 for specialty care. These plans increased copayments by an average of 95% for primary care (interquartile [IQ] range, 50%–150%) and 74% for specialty care (IQ range, 33%–150%); in matched plans these copayments were unchanged. After adjustment for the multiple covariates previously described, Medicare plans that increased copayments experienced 19.8 fewer outpatient visits per 100 enrollees (95% confidence interval [CI], 16.6–23.1), an increase of 2.2 hospital admissions per 100 enrollees (95% CI, 1.8–2.6), an increase of 13.4 in the number of days of hospital care per 100 enrollees (95% CI, 10.2–16.6), and a 0.7% absolute increase in the proportion of enrollees with any inpatient care use (95% CI, 0.5%–1.0%) as compared with the control plans. Enrollees in the case plans were more likely to be black, poor, and less educated than those in the control plans. The effects of cost sharing were increased for enrollees who had diabetes, hypertension, or a history of myocardial infarction. The authors estimated that in the first year after the copayment increase there would be 20 fewer outpatient visits, 2 additional admissions for acute care, and approximately 13 additional inpatient days for every 100 enrollees exposed to the increased copayment. Furthermore, they estimated that for every 100 enrollees, case plans would save a total of \$7150 from increased ambulatory copayments in return for an additional \$24,000 in inpatient care expenditures in the year following the increase.

**Conclusion.** Increased cost sharing in Medicare plans for ambulatory care reduced the use of outpatient care and increased inpatient care utilization among elderly enrollees. These inefficient trends occurred particularly among enrollees with chronic diseases and low socioeconomic status. Increased ambulatory care copayments appear to increase overall health care spending and have adverse health consequences on the elderly.

**Commentary**

As discussion of national health care reform moves towards the next phase of implementation, the complexities of containing health care costs are quickly becoming more apparent. Health care spending has increased dramatically in recent years and payers have frequently adopted various forms of cost containment to reduce health care spending [1]. Many cost containment strategies frequently introduce insurance copayments or cost sharing as tactics to compel patients to utilize health services and resources in a more efficient manner, primarily by stimulating cost savings. However, these cost containment strategies may potentially result in cost shifting rather than cost savings. In the short-term, cost savings may occur when enrollees forgo or delay care due the increased cost burden. Costs can ultimately increase when these individuals seek medical care only after their condition has worsened. Preliminary evidence suggests that when copayments are increased, patients are more likely to avoid necessary health care and incur financial burden, resulting in decreased insurance take-up and limiting the impact on overall economic trends [1,2].

Ideally, the adoption of uniform copayments would discourage only the use of those “low-value” services for which the costs outweigh the clinical gains [3]. However, studies suggest that increasing copayments, even at modest levels, reduces utilization of both low- and high-value health services, potentially resulting in poorer overall health outcomes [3]. As such, some experts posit that a clinically sensitive approach should be adopted in which copayment rates are based in part on the value of clinical services rather than on cost consideration alone [3]. This form of a Value-Based Insurance Design (VBID) may foster a more efficient resource allocation structure when the tenets of cost sharing are tailored to focus specific high-value services such as preventive care on the unique needs of each individual patient [3].

In this study, Trivedi et al measured care utilization among Medicare beneficiaries in plans that increased ambulatory care copayments versus those that did not over a 6-year period starting in 2001. They found a significant reduction in the number of outpatient visits (and a corresponding increase in inpatient care) when copayments for ambulatory care were increased. Particularly affected were beneficiaries with low income and chronic diseases. Their findings were robust in multiple sensitivity analyses, and they had a large sample across multiple geographic and sociodemographic entities.

The RAND Health Insurance Experiment (HIE) likewise found that those who paid a higher amount for outpatient care (through a deductible) made fewer outpatient visits than those persons receiving free care [4]. Interestingly though, the RAND experiment found that those who paid a deductible had fewer inpatient visits as well. Notably, the RAND HIE

excluded elderly patients. The work by Trivedi et al suggests that the elderly may be particularly susceptible to the negative effects of ambulatory cost sharing as they have lower incomes, poorer health, and greater out of pocket spending than the nonelderly. The elderly may also have more potential ambulatory care-sensitive conditions like congestive heart failure for which inpatient care utilization can be increased through reduced use of outpatient care.

The economic, mortality, and quality benefits of robust primary care are well documented [5]. Bindman et al (1996) showed that having a regular source of care is positively associated with the increased receipt of important preventive services [6]. Patients are less likely to attend an office visit and seek preventive care as a consequence of cost sharing [7]. Previous work by Trivedi (2007) demonstrates that even relatively small copayments have been associated with significantly lower rates of clinically indicated preventive care such as regular mammography [8]. Thus, the implication of this body of evidence is that eliminating ambulatory care cost sharing for preventive health services and other primary care may be an effective way to increase utilization of preventive services and reduce inpatient costs [9].

Limitations of the study included the short period of observation, the fact that case and control plans were not matched in geographic areas smaller than a census region, and that the researchers were unable to separate the cost effects between primary care and specialty visits. In addition, enrollees were not randomly assigned to either the case or control plans, so an intrinsic selection bias is possible. Finally, the data they used were not granular enough to specify exact mechanisms through which increased inpatient utilization occurred (such as increases in admissions for ambulatory care-sensitive conditions).

**Applications for Clinical Practice**

Now that national health reform legislation has passed, the search is on for finding ways to increase value in the costly U.S. health system. Policymakers can increase value for a given service by raising quality, reducing costs, or ideally both. Ambulatory care copayment increases appear to do none of the above. Increasing ambulatory care copayments for Medicare recipients lowers value primarily by increasing inpatient care utilization. The short-term outpatient care savings appear to be offset by more frequent and expensive inpatient care and may result in adverse health outcomes for those who can least afford these financial and health burdens.

—Review by Garrett Kirk, MPH, and Asaf Bitton, MD

**References**

1. Mays GP, Claxton G, White J. Managed care rebound? Recent changes in health plans’ cost containment strategies. *Health*

- Aff (Millwood). Jul–Dec 2004;Suppl Web Exclusives:W4-427–36.
2. Gruber J. The role of consumer copayments for health care: lessons from the rand health insurance experiment and beyond. The Henry J. Kaiser Family Foundation. October 2006.
  3. Chernew ME, Rosen AB, Fendrick AM. Value-based insurance design. *Health Aff (Millwood)*. Mar–Apr 2007;26:w195–203.
  4. Newhouse JP, Manning WG, Morris CN, et al. Some interim results from a controlled trial of cost sharing in health insurance. *N Engl J Med* 1981;305:1501–7.
  5. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q* 2005;83:457–502.
  6. Bindman AB, Grumbach K, Osmond D, et al. Primary care and receipt of preventive services. *J Gen Intern Med* 1996;11:269–76.
  7. Solanki G, Schauffler HH, Miller LS. The direct and indirect effects of cost-sharing on the use of preventive services. *Health Serv Res* 2000;34:1331–50.
  8. Trivedi AN, Rakowski W, Ayanian JZ. Effect of cost sharing on screening mammography in Medicare health plans. *N Engl J Med* 2008;358:375–83.
  9. Solanki G, Schauffler HH. Cost-sharing and the utilization of clinical preventive services. *Am J Prev Med* 1999;17:127–33.

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