



Physicians Among the Chief Drivers of High Drug Costs

Effects of cost control mechanisms on pharmaceutical use and costs

SUMMARY

During the 1980s, expenditures on pharmaceuticals nationwide increased by 152 percent. HMOs implemented a number of cost-control mechanisms to slow the rate of growth of pharmaceutical expenditures, and were successful in doing so compared to fee-for-service health plans.

To determine why these costs are lower in HMO settings and to identify the factors that contribute to decreased drug use, from 1994 to 1996, investigators from the University of Pennsylvania School of Medicine examined the effects—in five network model and five independent practice association (IPA) HMOs—of:

- Patient copayments.
- Provider financial incentives.
- Other HMO administrative controls.

This project was part of the Robert Wood Johnson Foundation (RWJF) national program *Changes in Health Care Financing and Organization* (HCFO) (for more information see the [Program Results Report](#)).

Key Findings

- The investigators found that drug expenditures are significantly higher in IPA-model HMOs where physicians are paid primarily on a fee-for-service basis than they are in network model plans where physicians are paid a capitated rate per patient and are financially liable for any pharmaceutical costs above that rate.
- Patient incentives, such as copayments, also play a role; the higher the patient copayment, the less likely it was that spending on drugs occurred.

Funding

RWJF supported the project with a grant of \$368,318 between February 1994 and July 1996.

THE PROBLEM

During the 1980s, expenditures on pharmaceuticals nationwide increased by 152 percent. Health maintenance organizations (HMOs) implemented a number of cost-control mechanisms to slow the rate of growth of pharmaceutical expenditures, and have been successful in doing so compared to fee-for-service health plans.

THE PROJECT

To determine why pharmaceutical costs are lower in HMO settings and to identify the factors that contribute to decreased drug utilization, the team of investigators examined the effects of patient copayments, provider financial incentives, and other HMO administrative controls in five network model and five independent practice association (IPA) HMOs.

In a network model HMO, physicians and other providers form a delivery system network and the entire network contracts with the HMO to provide care. Physicians are paid a capitated fee—a set monthly rate per enrolled patient. In an independent practice association (IPA) type of HMO, individual provider groups contract with the HMO to provide care to enrollees as a preferred provider of the HMO. Physicians are typically paid on a discounted fee-for-service basis.

The database from the 10 HMOs includes demographic data, provider data, pharmaceutical claims, and medical claims for the period 1990 through 1992 for approximately 172,000 enrollees between the ages of 16 and 64. The researchers hypothesized that the degree to which patients and physicians have to pay for drugs directly affects how often they are prescribed by physicians and used by patients.

The investigators found that drug expenditures are significantly higher in IPA-model HMOs where physicians are paid primarily on a fee-for-service basis than they are in network model plans where physicians are paid a capitated rate per patient and are financially liable for any pharmaceutical costs above that rate. However, physician incentives are not the only factor within HMOs that affects drug costs and use.

According to the research team, patient incentives, such as copayments, also play a role. In their research, they saw that the higher the patient copayment, the less likely it was that spending on drugs occurred. Moreover, when spending did occur, higher copayments were associated with less spending.

The researchers also found a relationship between patient copayment levels and the type of HMO. Although these copayments resulted in less spending in both network and IPA model HMOs, the patient copayments had a greater effect on curtailing spending on pharmaceuticals in the IPA plans. The research team also looked at the effect of physician visit copayments on drug spending in both network and IPA-model HMOs. They found that physician visit copayments resulted in lower spending in both types of plans, however, these copayments had a significantly stronger effect on drug spending in IPA plans than in network plans.

The investigators also explored the impact of cost control mechanisms on drug use related to specific chronic conditions such as diabetes or asthma. Preliminary findings indicate that physician financial incentives and patient copayments reduced pharmaceutical spending for specific clinical conditions in IPA plans but not in network plans.

With the continuing growth of HMOs and other managed care organizations, the investigators believe that the interaction between various cost control mechanisms and patient outcomes represents an important area for future research.

Communications

A manuscript was submitted to the *New England Journal of Medicine*.

Prepared by: Karin Gillespie

Reviewed by: Marian Bass and Molly McKaughan

Program Officer: Nancy L. Barrand

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