

# LDI *Issue Brief*

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## *From Hospital to Drugstore: Insurance and the Shift to Outpatient Care*

Editor's Note: As policymakers consider whether and how to add prescription drug coverage to Medicare, they need to understand the relationship between insurance coverage and the adoption of new medical technologies, including drugs. Even the direction of these relationships is not always so clear. In this Issue Brief, Drs. Danzon and Pauly examine the shift from inpatient to outpatient care in the last 20 years, and ask two broad questions: to what extent was this shift encouraged by changes in insurance, and to what extent was insurance coverage influenced by this shift?

### *Shift to outpatient care is matched by shift in insurance coverage*

Beginning in the 1980s, the U.S. health care shifted from the inpatient to the outpatient setting. Technological improvements resulted in more effective outpatient drugs and procedures, leading to fewer hospitalizations and shorter inpatient stays.

- From 1980-1998, the share of health spending attributed to hospital care dropped from 42% to 33%. Meanwhile, outpatient care (as represented by physician and drug spending) rose from 23% to 28% of all health spending.
- Drug spending (as a share of total health spending) rose from 5% in 1980 to 8% in 1998. Drug insurance coverage grew at an even faster rate. The proportion of all drug expenses paid out-of-pocket decreased from 66% in 1980 to 27% in 1998. Thus, in 1980 patients paid an average of \$3.30 out of pocket for pharmaceuticals per \$100 spent on health care; in 1998 they paid \$2.16.
- In this period, technological breakthroughs expanded the range of diseases that could be treated by drug therapies, creating new classes of costly but effective antidepressants, cholesterol-lowering medications, and antacids. These breakthroughs probably increased the demand for drug insurance. Conversely, insurance coverage almost certainly stimulated the use of existing drugs, and may have permitted the market to accommodate more costly but beneficial technologies.

### *Drug coverage in private sector expands*

To better understand how insurance for drugs changed, Danzon and Pauly used data from the 1987 National Medical Expenditure Survey (NMES) and the 1996 Medical Expenditure Panel Survey (MEPS). They examined data for people under age 65 who did not have public insurance, because this population is most likely to buy stand-alone private insurance.

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- In this population, the proportion of people with prescription drug expenses rose from 56% in 1987 to 65% in 1996. In contrast, the proportion of the people with inpatient expenses actually fell in the same time period.
  - The proportion of people receiving drug insurance benefits rose from 28% to 65%. However, there was no change in the proportion of the bill paid by insurance for people who had some drug spending and also had drug coverage (65% in 1987 vs. 64% in 1996).
  - The authors conclude that insurance for drugs improved over this period, but the change was not in the depth of coverage (percentage of expenses paid) for people with existing drug benefits; rather, it was in the proportion of people who had new drug coverage and used it.

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***Moral hazard: insurance coverage contributes to higher drug spending***

The theory of “moral hazard” from insurance states that people use more services when insurance, or some other third party, is paying. The authors sought to quantify the extent to which drug insurance coverage contributed to the actual growth in drug spending.

- Actual drug spending per person (adjusted for inflation) grew about 90% from 1987 to 1996. Some of those increases probably reflect the development and adoption of new and more effective drugs, but some probably reflect more generous insurance coverage for drugs.
- Previous estimates indicate that a 10% drop in the average out-of-pocket price of drugs to consumers can lead to a 3%-5% increase in the quantity of drugs purchased. From 1987 to 1996, the “average user price” (or out-of-pocket costs) as a proportion of the total price of drugs dropped by more than 50%. Had this decline not occurred, the authors estimate that the quantity of drugs purchased would have been 15%-25% lower than it actually was.
- This calculation is probably an underestimate, the authors note, because it does not take into account other ways that drug coverage could influence the demand for drugs. For example, increased coverage might affect the availability of new drugs, or it could prompt pharmaceutical companies to increase their advertising, both to physicians and directly to consumers. The adoption of managed drug benefits also reduced the time and hassle costs for consumers, who now simply present a card at the pharmacy and pay their co-payment, rather than paying in full and then seeking reimbursement from their insurers.

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***Improvements in outpatient procedures and drugs makes coverage more attractive***

Through the 1960s, insurance coverage of outpatient drugs and physician services was rare and incomplete, because these expenses were small and predictable. As technological change produced more effective (but more costly) outpatient drugs and procedures, insurance coverage of these expenses became more attractive to consumers. Danzon and Pauly again used 1987 NMES and 1996 MEPS data to illustrate this phenomenon in people under 65 who did not have public insurance.

- Between 1987 and 1996, outpatient expenses increased more rapidly than other kinds of spending. In that time period, inpatient spending (in inflation-adjusted dollars) decreased by 14% (per capita), while outpatient expenses increased 68%, and drug spending rose 194%.
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- Outpatient expenses shifted toward persons who already had high expenses in other categories of health spending. Drug expenses, in particular, grew most rapidly for the sickest people with the highest total spending. These shifts clearly created incentives for consumers to purchase outpatient drug coverage.
  - This suggests that growth in insurance coverage for drugs was itself stimulated by growth in the range and effectiveness of drugs available, which raised the typical individual's expected drug expenses

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*Insurance markets respond with new products integrating inpatient and outpatient care*

In response to the growth of effective outpatient drugs and services, the private sector developed new insurance products (especially managed care plans) and new insurance technologies to control the costs of drugs (pharmacy benefit management).

- Managed care offered coverage that integrated inpatient, outpatient and drug coverage. This integration allowed them to take advantage of opportunities to encourage more efficient forms of care regardless of whether that was provided through inpatient services or pharmaceuticals.
- Pharmacy benefits managers (PBMs) developed strategies to handle multiple small claims and control costs. These strategies include negotiating price discounts from manufacturers, using formularies of preferred drugs, drug utilization review, and mail-orders for chronic medications. PBMs turned to card-based systems, where the pharmacy bills the plan electronically, to reduce the time and hassle cost to the patient.
- The authors suggest that the development of managed care strategies to control drug utilization may have been a necessary ingredient for this coverage to become a cost-effective form of insurance.

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***POLICY IMPLICATIONS***

This analysis suggests that the cause and effect relationships between costly but beneficial pharmaceutical innovation, and the insurance coverage for that innovation, are complex and bi-directional. Technology prompted insurance coverage, and new insurance coverage raised costs (and probably stimulated new technology as well). These complex arrangements relied partly on the benefits of newly developed drugs, and partly on the creation of new insurance systems that integrated the financial and clinical exposures insurers faced across historically separate areas of care.

- The historical practice of developing coverage on a service-by-service basis prevents efficiencies realized from shifting care from one kind of service (e.g., inpatient care) to another (e.g., outpatient drugs). Insurance that protects consumers against financial loss should make payments based on a person's total medical care spending, rather than on the size of the components of that spending.
- The private sector, overall, has responded well to shifts in care by designing new insurance products. In failing to provide outpatient pharmaceutical coverage, Medicare has lagged behind this trend. Many Medicare recipients have no drug coverage, and many others obtain Medigap coverage for drugs, which provides only limited protection.

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## **POLICY IMPLICATIONS**

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- The organizational separation of insurance coverage into inpatient and outpatient care (and especially into drug and nondrug coverage) is undesirable. The harm from having one insurer cover inpatient care and another cover drugs is likely to be especially acute for Medicare.
- However a Medicare drug benefit is organized, policymakers should consider the use of managed care techniques (such as PBMs) to improve the cost-effectiveness of the coverage.

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*This Issue Brief is based on the following articles: P.M. Danzon and M.V. Pauly. Insurance and New Technology: From Hospital To Drugstore. Health Affairs, September/October 2001, Vol. 20, pp. 86-100; and P.M. Danzon and M.V. Pauly. Health Insurance and the Growth in Pharmaceutical Expenditures, under review, Journal of Law & Economics.*

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