

The Ripple Effects of a Restrictive Medicaid Formulary

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The paper by Wang and colleagues¹ analyzes the effects of an interesting natural experiment—Maine's adoption of a restrictive Medicaid drug formulary in January 2001. The focus of the paper is on spillovers from this restrictive formulary to other sectors of the market. In particular, it investigates how the implementation of this formulary affected the prescribing behavior of physicians with respect to their non-Medicaid patients—those patients that pay out of pocket, have their prescriptions reimbursed by an insurance plan, and those that utilize a mail-order supplier. Medicaid-preferred drug programs differ from those employed by HMOs in that the prevalent 3-tier copayments are not a feasible approach for the Medicaid population. Accordingly, many states with severe pressures on their Medicaid budgets are now turning to essentially closed formularies where prior authorization is necessary to obtain nonpreferred drugs.

The Wang paper focuses on the proton pump inhibitors (PPIs) class of drugs for gastroesophageal reflux disease. This is one of the therapeutic classes with the highest level of drug consumptive expenditures. In the case of the Maine program, the only preferred PPI drug on this formulary was pantoprazole. In the preformulary period, this drug had a market share of only a few percent. The authors structure their analysis as a before-and-after event study, with a 3-state comparison design (New Hampshire and Vermont serve as controls). The data set, while limited in scope in terms of insurance data, is an excellent one to consider some first-level hypotheses on spillover effects. Data on individual prescribing physicians are the basic unit of observation.

Given the experimental design and data, the results are very persuasive with respect to the main hypotheses examined. In particular, the institution of the state's restrictive formulary has resulted in a dramatic change in the preferred drug's market share in Maine (79% increase in Maine compared to 1% to 2% in New Hampshire and Vermont). Second, and more interest-

ing, there are substantial spillovers to cash and third-party payer of the prescriptions. The market share of pantoprazole increased 10% in Maine among cash prescriptions (versus 3% in the control states) in the period after the Medicaid formulary was implemented. Similarly it increased 7% in Maine among other third-party prescriptions (versus 1% among the control states). The authors utilize a linear regression model to quantify the extent of spillovers. These spillovers are economically and statistically significant, and increase with the share of a prescriber's Medicaid practice.

One concern I have with the findings on spillovers is that the effects are measured a few months after the program's implementation. The figures shown in the paper indicate there may be some moderation of the spillover effects over time, particularly for the physicians with the highest share of Medicaid patients (see Figures 6 and 7). This could reflect the fact that some physicians may initially widely prescribe pantoprazole to both their Medicaid and non-Medicaid patients and then adjust their practices after learning which patients are better suited for alternative therapies. In addition, physicians may also respond to patients who have a preference for other PPIs based on their past experiences with other drugs in the class. Nevertheless, even if this is the case, this wouldn't negate the authors' primary findings that there are sizeable spillover effects in the Maine case.

The paper points to a number of interesting research issues from an economic and policy perspective. First, Maine is clearly representative of what is happening in many other states in terms of a movement to closed formularies with prior authorization. Some states have initiated preferred drug programs that focus only on a few major therapeutic classes (eg,

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Minnesota and Oklahoma). Others have adopted comprehensive programs spanning virtually all drugs except for a few exempt categories (eg, California, Michigan, Florida, and Illinois). Many other states have pending legislation or programs that will restrict access to drugs (eg, North Carolina, Connecticut, Iowa, and Missouri).

As the size and scope of these programs increase and significantly impact the other third-party payers, what will be the response of the private sector? As noted in the paper, one might reasonably hypothesize that spillover effects will be greater for private sector programs which are less restrictive and have the lower copayments. One can imagine cases where Medicaid restrictive formularies will produce positive cost-containment benefits for these private sector programs, but in other cases the reverse will be true. Will the movement to more restrictive programs in state Medicaid programs then lead to corresponding shifts toward more restrictiveness in the private sector?

Correspondingly, the states can be viewed as a laboratory for experimentation that will be closely watched

by federal policymakers. This will be relevant to a future Medicare prescription drug benefit. One can easily envision a Medicare prescription drug benefit, if and when enacted, that will be subject to similar budgetary pressures for expansion and cost containment to what the states are now facing under Medicaid. Will federal policy officials then be more inclined to respond with very restrictive formularies if this has become the primary cost-containment instrument of choice in state plans?

Underlying all these questions is the need to know more about how restrictive formularies affect the costs of other medical services, and their effects on overall patient health status and quality of life. The authors' finding that these programs have significant spillover implications for other populations only increases the importance of such research.

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REFERENCES

1. Wang YR, Pauly MV, Lin YA. Impact of Maine's Medicaid drug formulary change on non-Medicaid markets: spillover effects of a restrictive drug formulary. *Am J Manag Care*. 2003;9:686-696.