

Medicaid: The cost of deficient information

With support from the IBM Corporation, a team of Institute economists has analyzed how the Medicaid program operates in Wisconsin. The study focuses on the costs incurred as a result of deficiencies in communication among the various parties involved in that complex system of medical assistance for the poor.¹

In designing the study, Ralph Andreano, Institute affiliate and professor of economics, and his colleagues used as their counterfactual a hypothetical world in which information flows in a perfect manner between the parties in the system—the state, the health care providers, and the patients. In this world, when a patient enters a physician's office, the doctor can immediately and accurately determine whether the person is eligible for Medicaid, whether he or she is already enrolled, and what particular services are reimbursable under Medicaid rules. The physician's office staff knows exactly how to go about obtaining reimbursement as well, following specified procedures. The request for reimbursement is promptly transmitted to the state (or, as in Wisconsin, the fiscal agent designated by the state), which promptly remits the amount due.

Although this world contrasts sharply with Medicaid reality, posing it as the counterfactual helped Andreano's team perceive five separate areas of information exchange, from start of service to receipt of payment by the provider: (1) recipient certification, (2) policy concerning benefits covered, (3) claims for reimbursement, (4) advice on status of claims, (5) payments to providers.

The researchers selected a random sample of 371 claims that were rejected at some stage, owing to information error, and tracked those claims through the labyrinth of submission, rejection, resubmission, appeal, and final resolution, estimating the dollar amount paid by state and provider in order to communicate with one another at each stage. They applied the sample statistics thus obtained to the universe of all rejected claims (some ultimately paid) in one calendar year, 1983, to obtain an estimate of total costs per year resulting from imperfect information. Those estimates for the state were then projected to the nation as a whole.

Within each of the five information functions, the research distinguished between "operating costs" of communication and "costs resulting from deficient information." Operating costs are those built into the system in order to communi-

cate. Deficient-information costs are those incurred because communication is not complete. The latter presumably could be reduced by some more efficient form of transmittal. The five areas, and a simplified sketch of the costs within each, are as follows.

1. *Recipient certification*

Like most other states, Wisconsin issues to Medicaid recipients a paper identification card that specifies what range of services may be reimbursed, the limitations on providers or on the services that the recipient may utilize, and whether there is other insurance coverage to be billed before Medicaid will pay. Andreano and his colleagues estimated that the operating costs to the state for issuing the cards amounted to \$588,000 in 1983. (These and other dollar amounts are listed in Table 1.)

The cards are printed and mailed monthly, certifying recipients for eligibility only for the ensuing month. Sometimes a patient does not bring the card or the provider does not check the card when services are administered, and thus not all of the required information is transcribed. As a result claims may be denied, and the providers must pay the costs of obtaining the necessary data and resubmitting the claims. The state bears the cost of processing the rejected claims. The state also incurs costs when, after issuing a card, its certifying agencies determine that the bearer was not actually eligible for the services specified on the card. Under Wisconsin's "good faith" policy, the state must nevertheless reimburse providers for services rendered during the month for which the card was issued.

The annual price paid by the state as a result of informational errors concerning recipient certification was estimated to be \$1.8 million. Andreano's team found that providers paid far more as a result of faulty information in this area: over \$30 million per year.

2. *State policy concerning benefits*

Wisconsin distributes handbooks, updated periodically, explaining to providers what services are reimbursable and what the limitations and conditions for reimbursement are. Benefit coverage and conditions are complex, however, and providers are not always certain that a particular service is covered—or, when they feel certain, they may subsequently

learn that such was not the case. A doctor's staff may phone or write the state to seek clarification before submitting a claim, or, when a claim is submitted and then rejected on the grounds of noncoverage, they often contact the state to learn why. The state must process rejected claims, and its personnel must spend time answering the providers' queries.

The state's estimated operating costs related to the handbooks amounted to about \$82,000 a year. Its efforts resulting from deficient information—answering questions and processing claims that were rejected owing to noncoverage—cost \$224,000 annually. The providers paid much more in order to clarify policy before or after submitting claims, or suffered losses because their reimbursement was delayed while a claim went through the rejection and clarification process. Those costs came to almost \$17 million a year.

3. *Claims and billing for reimbursement*

Providers are required to submit claims for reimbursement in specified formats that vary by groups of service, and they must follow particular billing regulations. The operating costs in this area are those paid by the state for producing and mailing the forms, by the providers for completing and mailing the forms, and by the state for then entering the data into the processing system.

In the ideal world of perfect information exchange, the provider receives payment immediately upon submitting the claim. In the world of Medicaid, providers experience losses when claims are rejected because they were not filed properly; the state and providers incur losses when questions are raised and then answered; providers lose when reimbursement is delayed owing to the need to resubmit, and they also bear the administrative costs of resubmission. The state must then process resubmissions.

The researchers estimated that annual operating costs connected with submission of claims were \$1.4 million for the state, \$407,000 for providers. The deficient-information costs to the state were \$405,000 a year, while providers paid over \$24 million to cover expenses related to filing errors.

4. *Advice concerning the status of claims*

After filing a claim, the provider receives a statement describing the adjudication status—whether the claim is to be paid (and the reason for payment cutback, if any), or denied, or is still being processed. Operating costs cover printing and mailing the statements: \$439,000 paid by the state each year. Problem costs are those borne by the state and providers for queries and responses about the status of claims. Sometimes providers submit a duplicate claim before they learn the status of the first. Duplicate claims cost both state and provider—the latter bears administrative costs of submission, the former of processing. Andreano's team estimated that the state's annual expenses to rectify deficient information regarding claim status was \$154,000; providers paid \$72,000.

Table 1
Summary of Estimated Annual Informational Costs of Medicaid in Wisconsin (in thousands of dollars)

Information Function	Operating Costs	Deficient-Information Costs
1. Recipient certification	State	State
	\$588.1	\$1,845.9
2. Benefits provided under Medicaid	State	State
	\$82.2	\$224.4
3. Claims for reimbursement	State	State
	\$1,398.3	\$405.3
4. Advice on status of claims	Provider	Provider
	\$407.3	\$24,394.9
5. Payments to providers	State	State
	\$82.3	\$153.7
Total	Provider	Provider
	\$407.3	\$71.7
Total	State	State
	\$2,589.9	\$2,629.3
Total	Provider	Provider
	\$407.3	\$72,476.3

5. *Payments to providers for favorably adjudicated claims*

Once a claim has wound its way through this complicated process and is deemed valid, it might seem that payment would be promptly forthcoming. Not so. After adjudication, the state must order and complete the "checkwrite," must merge the checks with the statements on the status of claims, and then mail the checks to providers, who must deposit the checks in their accounts before the process is complete. Operating cost to the state, for printing and mailing checks: \$82,000 a year. The deficient-information cost in this area relates solely to the payment transmittal lag—the period between final adjudication of the claim and the time the provider has deposited payment. The interest lost on payments owing to the delay, in contrast to an ideal world of immediate payment (e.g., by electronic transfer), amounts to an estimated provider cost of \$1 million annually.

The bottom line

Table 1 summarizes the cost estimates produced by the study. The operating and deficient-information costs borne by the state are almost equal, at about \$2.6 million. The operating

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experiment, and carry out an analysis of the sensitivity of different statistical models for estimating the experimental effects.

D. The Effects of AFDC on the Labor Force Behavior of Men, on State Fiscal Responsibility, and on Welfare Dependence. Investigator: Robert Moffitt.

Many hypothesized effects of AFDC have not been adequately studied. Robert Moffitt will investigate three: whether AFDC has any effects on the labor force behavior of men; the connection between the trends of increasing federal aid to the needy (particularly in-kind transfers) and the reduction in the value of the AFDC benefits paid by states, and the dynamics of welfare dependency.

Studies have been made of the potential for the AFDC system to affect women's decisions to head their own households. If AFDC benefits have this effect on women, we should observe fewer men remarrying, fewer men who marry in the first place, and more in a marriage or nonmarital union that dissolves. It is known that married men and those who support children work longer hours and have higher wage rates, employment rates, and labor force participation rates. Is the AFDC system indirectly acting to depress the labor force attachments and performances of men as well as women?

Moffitt will use data from the March Current Population Surveys from 1967 to 1984 to discover the extent to which male labor force behavior is correlated with the AFDC benefit level both across states and over time. Data files will be assembled for each year, containing benefit levels, demographic information, and various measures of labor force behavior. The causes of the various labor market effects will be isolated. Next a comparison across years will be performed. Do effects remain the same, or do they increase over time? To what extent are changes in labor force behavior of men a function of changes in the AFDC benefit and other variables?

Moffitt's second and third projects will make use of a data set he constructed to measure the effect of the AFDC program on the work effort of female heads of families.

Analysis of the trends in state and federal programs from 1967 will give a full picture of how state AFDC benefits altered as federal programs grew—especially Food Stamps and Medicaid. Moffitt will examine the matching rates (the proportion paid by the state and the proportion paid by the federal government) of AFDC, Food Stamps, and Medicaid. Can they be manipulated or changed in a way that will induce states to pay a larger share?

Finally, Moffitt will investigate the determinants of AFDC dependency. Participation rates have gone through dramatic swings, rising in the late 1960s and early 1970s, stabilizing in the mid-1970s, and declining in the later 1970s. The usual separate explanations for these two phases of the cycle are

that the increase in rates was caused by changes in attitudes toward welfare and court-induced liberalization of the rules, whereas the decrease in rates is the result of the decline in real AFDC benefits. But a number of questions such as the following have not been addressed until now: How strongly are participation rates across states correlated with AFDC benefits? Has the correlation changed over time? Were women "more responsive" to AFDC benefits in the 1960s and early 1970s than later? Such other determinants of dependency as wage rates, job opportunities, unemployment rates, education, age, and so on, will also be explored to determine how they vary from state to state over the 1967-83 period. ■

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costs to providers are less than half a million, but imperfect information costs them \$72.5 million. For Wisconsin, then, the bottom line of all expenses resulting from deficient information is \$75 million a year.

The research team then compared aggregate Medicaid expenditures in other states. In 1982, the average expenditure on Medicaid in the other states, excluding Arizona (which has a different system) and including the District of Columbia, was .795 the size of Wisconsin's expenditures. If the average dollar loss resulting from deficient information in those 49 other jurisdictions was considered to be .795 times Wisconsin's loss, the total amount of deficient-information costs, extrapolated nationally from the Wisconsin estimation, would be about \$3 billion a year. To justify this extrapolation, Andreano's group surveyed twelve other states in more detail and found that program procedures and statistics on the rejections of claims, billing and processing lags, and volume of provider inquiries in those states indicated that the cost estimates for Medicaid in Wisconsin were not atypical. They concluded that improvement in information exchange may hold promise for considerable reduction in costs of the Medicaid program.

Yet the introduction and operation of such technological improvements also cost money. Noting that some states are implementing automated procedures in Medicaid, the researchers recommended that individual states carefully evaluate existing or proposed automation systems and compare the costs of these interventions with the expected reduction in information costs to determine the magnitude of benefits or losses. ■

¹ Ralph Andreano, Eugene Smolensky, and Thomas Helminiak, "The Economics of Information Exchange and Automation in Third-Party Insurance: A Study of Medicaid in Wisconsin," IRP Discussion Paper no. 792-85.