MEDICAID SHORTFALLS

AND TOTAL UNREIMBURSED HOSPITAL CARE FOR THE POOR

1980-1989

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ABSTRACT

This article examines the relationship between Medicaid payments and hospital costs between 1980 and 1989, using data from the American Hospital Association's Annual Survey of Hospitals. It finds that payments covered about 90 percent of Medicaid hospital costs until 1985, then declined to 78 percent in 1989. Together, Medicaid shortfalls ($4.2 billion) and unsponsored care ($8.9 billion) accounted for $13.1 billion in unreimbursed hospital costs in 1989. Most of the recent growth in unreimbursed hospital cost incurred in care for the poor is now caused by rising Medicaid shortfalls rather than increases in unsponsored care: While Medicaid shortfalls accounted for about one-fifth of unreimbursed care for the poor in 1980, they accounted for a third in 1989.

MEDICAID SHORTFALLS AND TOTAL UNREIMBURSED HOSPITAL CARE FOR THE POOR, 1980-1989

The indigent care problem reveals itself in many ways -- growing numbers of uninsured, inadequate coverage or "underinsurance," and limited access to timely and appropriate care. Previous analyses have shown that the problem also has consequences on the payment side, in the form of uncompensated care to hospitals.[1] Particularly in recent years, hospitals and other providers have also contended that inadequate Medicaid payment levels are creating an "undercompensated" care problem -- shortfalls between the cost of services for Medicaid patients and Medicaid payments for these services. While there has been some state-level analysis of this issue, particularly in conjunction with recent lawsuits,[2] little is known about the extent of Medicaid shortfalls at the national level.

As part of a broader research initiative on hospital care for the poor,[3] we are analyzing the relationship between Medicaid payments and costs between 1980 and 1989, using financial data provided by hospitals in response to the American Hospital Association's Annual Survey of Hospitals. We also are seeking to determine the interaction and combined impact of Medicaid shortfalls and "unsponsored" care -- care for which the hospital receives no payment or public subsidy. This article presents preliminary aggregate data resulting from this effort. Further details, and disaggregated data, will be the subject of subsequent analyses.

Medicaid Payments and Medicaid Costs

The first step in our analysis was to compare Medicaid payments for hospital services with the estimated cost of those services. Medicaid payments were defined simply as the difference between gross Medicaid revenue (charges) and contractual adjustments.[4]

The determination of Medicaid costs was somewhat more complex, involving the conversion of charge data (gross patient revenues) to costs, through the application of each hospital's cost-to-charge ratio. Because the Annual Survey does not contain cost data by payer, and because there are no national data concerning the costs of hospital services to Medicaid beneficiaries, a proxy for the Medicaid cost-to-charge ratio was needed. Alternative proxies were considered, including the Medicare cost-to-charge ratio. We opted to use each hospital's total facility cost-to-charge ratio (the ratio of total expenses to total gross patient and other operating revenue) for three reasons: First, it is available for all hospitals on the AHA data base. Second, it reflects the costs of all patients rather than just those covered under the Medicare program, and therefore is less likely to be distorted by the particular service mix needs of the Medicare population or by variations in hospital methods of allocating costs among departments. Third, it is the same formula we and others[5] have used to compute uncompensated care costs, and use of the same formula facilitates analysis of the interrelationship between uncompensated care and Medicaid shortfalls.[6]

A preliminary analysis of payment data and cost estimates, summarized in table 1, shows that payments covered approximately 90 percent of costs in 1980. Both payments and costs increased over the next nine years, but costs grew more quickly, particularly in the second half of the decade. Estimated Medicaid costs grew from $7.4 billion in 1980 to $19.4 billion in 1989. This represented an annual compound growth rate of 11.4 percent, greater than

the increase in over-all hospital expenses (10.2 percent a year) and Medicaid payments (9.5 percent a year). During that same time, contractual allowances increased from $2.1 billion to $12.4 billion, or 21.7 percent a year.

(TABLE 1 ABOUT HERE)

The resulting Medicaid payment-to-cost ratio remained steady at around 90 percent during the first half of the decade, then began to decline, reaching 78 percent in 1989. As a result of this change, hospital shortfalls from Medicaid grew from $0.7 billion to $4.2 billion during the decade.[7] Much of this growth was due to inflation, but the gap between payments and costs grew twice as fast as the costs themselves. As shown in the final column of Table 1, Medicaid shortfalls amounted to only 0.9 percent of hospital expenses in 1985, but 2.3 percent in 1989.

The growing role of Medicaid shortfalls as a factor in hospital costs from care to the poor is particularly significant because Medicaid historically has not been a large payer source for most hospitals. As the figures in Table 1 show, Medicaid is becoming an increasingly important source of costs, though a decreasing source of payments. Between 1980 and 1989, Medicaid's share of hospital costs grew from 9.6 percent to 10.5 percent, but the program's share of payments actually declined -- from 9.0 percent of net patient revenues in 1980 to 8.6 percent in 1989.

In theory, this increase in hospital shortfalls could follow any number of patterns. At one extreme, a few large hospitals in a few large states could be experiencing sharp declines in reimbursement relative to costs. At the other extreme, the shortfall could result from declines in reimbursement across the states and among hospitals of all types. Although further investigation of this issue is required, our preliminary analysis suggests that the real pattern comes much closer to the latter model, in two respects. First, as shown in figure 1,

the number of hospitals experiencing Medicaid shortfalls has been growing, particularly in the second half of the decade, so that payments are now below costs in nine out of ten hospitals. In 1984, 39.1 percent of hospitals were receiving Medicaid payments which met their costs, and therefore had no Medicaid shortfall. By 1989, payments were covering costs in only 12.7 percent of hospitals. Second, as also shown in figure 1, the number of significant losers also increased during this period. The proportion of hospitals with shortfalls representing more than 2.5 percent of total expenses rose from just over 10 percent in 1984 to 36.0 percent in 1989. Those with shortfalls above 5 percent of total expenses went from 2.8 percent to 8.8 percent during this period.

(FIGURE 1 ABOUT HERE)

The actual amount of Medicaid shortfall, and the amount of shortfall relative to overall costs, obviously will vary considerably from one hospital to another, depending on a multitude of factors including the individual hospital's costs, payer mix, and patient mix; the particular reimbursement rate and mechanism established by the state; and whether the hospital is a disproportionate share provider under Medicaid. Subsequent analyses will focus on these and other variables.

Another interesting question for future research concerns the relationship between Medicaid payment and the "marginal" cost of caring for those particular patients. Unfortunately, this is not a question that could be answered using this particular data base, and it is not an easy question to answer in any case, requiring a number of assumptions about which costs are fixed and which are not, an ability to directly measure rather than estimate costs at the hospital-specific level, and more consensus than presently exists about how the unit costs of care vary between the poor and the non-poor.

Medicaid Shortfalls and Unsponsored Care

A second phase of our analysis was to examine the role of Medicaid shortfalls in overall hospital financing of care to the poor,[8] and in particular to measure the cumulative impact of Medicaid shortfalls and unsponsored care. In the past, uncompensated care (bad debts plus charity care, expressed as costs) or unsponsored care (uncompensated care costs minus state and local tax appropriations) have generally been used as measures of hospital costs in caring for the poor. Given the increase in Medicaid shortfalls, however, it is clear that any assessment of unreimbursed costs for hospital care to the poor must, at a minimum, consider these shortfalls as well.[9]

As shown in table 2, uncompensated care cost hospitals $11.1 billion in 1989. Because state and local tax appropriations covered $2.2 billion of this, net "unsponsored" care -- not covered by the patient, insurer, or public subsidies -- is $8.9 billion. Adding in Medicaid shortfalls brings the total unreimbursed cost of care for the poor in 1989 to $13.1 billion.

(TABLE 2 ABOUT HERE)

Perhaps more important than the total amount of unreimbursed care is the trend in this amount. In combination, unsponsored care and Medicaid shortfall grew from $3.5 billion in 1980 to $13.1 billion in 1989, an annual compound rate of 15.7 percent. But absolute numbers can be deceiving, because much of this increase is attributable to overall inflation in hospital costs. To control for inflation, we examined Medicaid shortfalls and unsponsored care as a percentage of hospital expenses. As shown in the final column of table 2, unsponsored care and Medicaid shortfalls rose from 4.6 percent of total expenses in 1980 to 7.1 percent in 1989, an annual compound rate of 5.0 percent.

The most surprising finding of our study is the fact that Medicaid shortfalls are now growing more quickly than unsponsored care levels, and therefore account for an

increasing share of unreimbursed care for the poor. This trend appears to have started at the middle of the decade. During the early 1980s, unsponsored care levels grew each year, accounting for 3.7 percent of hospital expenses in 1980 and 4.6 percent in 1984. Since then, they have levelled off, and have ranged between 4.6 and 4.9 percent. But Medicaid shortfalls began to climb just as unsponsored care levelled off,[10] with the result that total unreimbursed care for the poor continued to grow. As a result, while Medicaid shortfalls accounted for about one-fifth of unreimbursed care in 1980, they amounted to a third in 1989.

(FIGURE 2 ABOUT HERE)

For many reasons -- differences in community demographics, differences in hospital resources, differences in hospital mission and specialty, and differences in state public and private insurance policies -- unreimbursed costs resulting from care to the poor are likely to vary from one hospital to another. The next stage of our research will include a detailed examination of the extent, causes, and consequences of such variations. Our preliminary analysis, however, shows that a growing proportion of hospitals are incurring some unreimbursed costs in caring for the poor, and that the extent of these unreimbursed costs has grown. As shown in figure 3, the proportion of hospitals allocating more than 5 percent of their expenses to unreimbursed care for the poor grew from a quarter of all hospitals in 1980 to two thirds in 1989. Those spending more than 7.5 percent rose from 11 percent to a third of all hospitals.

(FIGURE 3 ABOUT HERE)

Discussion and Implications of the Data

In sum, our preliminary data show that unreimbursed care for the poor constitutes a growing share of hospital expenses, and that Medicaid shortfalls constitute the fastest growing (though still smallest component) of unreimbursed hospital care for the poor. If these data are borne out by subsequent research, they could have important political implications.

First, the growth of unreimbursed care for the poor as an expense item (from 4.6 percent to 7.1 percent of hospital expenses) increases the financial pressure on hospitals to shift costs to other payers. Typically, hospitals will try to recoup losses from non-paying patients by increasing charges to other payers, in most cases private payers. Hospitals may not always succeed in shifting costs. For example, their private pay base may be too small, or their market area too competitive.[11] But as the amount of shortfall grows, the need to find some alternate source of funding increases as well. Declining hospital operating margins in the second half of the decade -- from 6.0 percent in 1985 to 3.4 percent in 1989, according to data from the American Hospital Association's Annual Survey of Hospitals[12] -- undoubtedly add to these pressures.

Medicare disproportionate share payments provide one potential public sector cross-subsidy. This allocation is intended to compensate hospitals for the presumed additional costs of providing care at hospitals with a disproportionately large share of low-income patients -- specifically Medicaid patients and low income Medicare patients. The twin rationale is that low-income Medicare patients are sicker and therefore more expensive to treat than their wealthier counterparts, and that hospitals with large numbers of poor patients will incur additional costs because of extra staffing and services needed to respond to the additional requirements of such patients.[13] In the event that these

additional payments exceed the need expressed by these two rationales, the extra dollars presumably could be applied to Medicaid shortfalls or unsponsored care as well. However, even if the entire disproportionate share allotment -- about one billion dollars in 1989 -- had been available and applied to unsponsored care and Medicaid shortfalls, it would have covered less than a tenth of the total,[14] leaving over 12 billion in 1989 to be shifted to private payers.

To the extent that cost shifting pressures increase, the changing composition of unreimbursed costs becomes more significant. By 1989, one third of unreimbursed care for the poor took the form of Medicaid shortfalls, meaning that one third of the potential private sector cross-subsidy of the poor involved a cost shift from public to private payers. But shifting costs from public payers to private payers may be more controversial for the private sector than shifting costs from the uninsured poor to private payers, particularly at a time when employers are concerned about rising health insurance costs and reform proposals are suggesting the need for some form of mandated employer insurance.

Endnotes

1. See Frank A. Sloan, Joseph Valvona, and Ross Mullner, "Identifying the Issues: A Statistical Profile," in Frank Sloan, James F. Blumstein and James M. Perrin, eds., **Uncompensated Hospital Care: Rights and Responsibilities** (Baltimore, MD: Johns Hopkins University Press, 1986); Judith Feder, Jack Hadley, and Ross Mullner, "Poor People and Poor Hospitals: Implications for Public Policy," **Journal of Health Politics, Policy and Law** 9 (Summer 1984): 237-250 and "Falling through the Cracks: Poverty, Insurance Coverage, and Hospital Care for the Poor, 1980 and 1982," **Milbank Memorial Fund Quarterly/Health and Society** 62 (1984): 544-66; American Hospital Association, **Direct Financing of Uncompensated Care: Critical Questions in the Use and Evaluation of Uncompensated Care Pools and Other Provider-Focused Approaches** (Chicago: AHA, 1990).

2. See **AMISUM (PSL), Inc. v. State of Colorado Department of Social Services**, 879 F.2d 789 (10th Cir. 1989), **cert. denied,** 110 S.Ct. 3212 (1990); **Wilder v. Virginia Hospital Association,** 110 S.Ct. 2510 (1990).

3. The over-all data initiative on hospital care for the poor has three components: A full analysis of uncompensated care data and Medicaid payment data from the Annual Survey of Hospitals (recently completed), case studies of care to the poor in hospital emergency rooms and outpatient clinics (in process), and a special survey of hospital care to the poor (currently at the early design stage).

4. In years when the Annual Survey asked for net Medicaid payments but not contractual allowances, net Medicaid payment figures were used. No major discontinuities were observed as a result of this difference in those years.

5. The cost-to-charge formula used here to compute costs of Medicaid and uncompensated care has some technical adjustments not included in AHA reports on uncompensated and unsponsored care published before 1991. In the aggregate, the effect of the adjustments is to lower cost figures very slightly. While most of these changes disappear in the rounding process, some of the uncompensated care data appearing here will differ slightly from those published by the AHA prior to 1991. For more detailed information, see American Hospital Association," "Uncompensated and Unsponsored Hospital Care," 1980-1989, A Fact Sheet Update," (Chicago, IL: American Hospital Association, forthcoming.) The authors are grateful to Jack Ashby of the Prospective Payment Assessment Commission (PROPAC) staff for his suggestions in refining the formula for computing the cost-to-charge ratio for uncompensated care.

6. This methodology does not take account of the fact that some of these costs would not be allowable under Medicare principles of reimbursement. On the other hand, it may understate costs because it does not take account of the fact that services for the poor may be more costly. See Arnold Epstein, Robert S. Stern, and Joel S. Weissman, "Do the Poor Cost More? A Multihospital Study of Patients' Socioeconomic Status and Use of Hospital Resources," **New England Journal of Medicine** 332 (1990): 1122-8. It should also be noted that the use of estimated cost-to-charge ratios, however they are computed, introduces a source of error into the calculations, and therefore potentially can increase the variance among hospitals. This posibility does not create a major concern for the present analysis, which focuses on overall trends, but it could become more significant in future analyses focusing on hospitals with high losses. For this reason, later stages of this project are expected to analyze patterns in the distribution of cost-to-charge ratios themselves.

7. These figures reflect "net" losses. In 1989, for example, about 13 percent of all hospitals received payments which slightly exceeded their costs. Our analysis subtracts the total amount of these "winnings" -- $0.3 billion -- from the $4.6 billion in losses incurred by the other 87 percent to yield a net figure of $4.3 billion in shortfalls.

8. "Hospital care for the poor" is used here as a rough shorthand term to refer to care for Medicaid patients and other patients whose care is uncompensated or unsponsored. While not all recipients of uncompensated or unsponsored care are below the federal poverty level, state studies have found that the vast majority are either poor or near-poor. See, for example, Duke University, **Health Care for the Medically Indigent of South Carolina: Final Report** (Durham, N.C.: Duke University Center for Health Policy Research and Education, 1988); Paul R. Duncan, Jan L. Colbert, and Jane F. Pendergast, **State University Study of Indigent Care, Volume II: The Analytic Report** (Gainesville, Fla.: Center for Health Policy Research, University of Florida Health Center, 1986). Our analysis does not attempt to measure the cost of other unreimbursed services hospitals may provide, or underpayments for care to poor Medicare patients. AHA's Medicare PPS simulation model estimates that Medicare PPS underpayments to hospitals were $2.7 billion in 1990.

9. For a discussion of this issue, see Lawrence S. Lewin and T. E. Eckels, "Special Report: Setting the Record Straight: The Provision of Uncompensated Care by Not-for-Profit Hospitals," **The New England Journal of Medicine** 318 (May 1988): 1212-15.

10. This change coincided with a change in Medicaid eligibility policy. The very early 1980s were a period of cutbacks in Medicaid eligibility, whereas the late 1980s were a period of selective expansion. As a result of more stringent eligibility rules under the 1981 Medicare and Medicaid amendments, the number of recipients declined from 22.0 million in 1981 to 21.6 million in 1982, 1983, and 1984. But the number of recipients began to climb at mid-decade, and reached 23.5 million by 1989. See Thomas W. Reilly, Steven B. Clauser and David K. Baugh, "Trends in Medicaid Payments and Utilization, 1975-89," **Health Care Financing Review: 1990 Annual Supplement** (December 1990): 15-33.

11. Some hospitals with relatively small shortfalls may calculate that payments exceed their marginal costs, and therefore that they can operate with some shortfall, at least in the short run. Others may feel a strong need to shift costs but may not be able to do so. The relationship between underpayments and cost shifting is more complex than commonly believed, and the question of when, how, and how successfully hospitals shift costs to private payers is an area requiring considerable more research. See Jack Hadley and Judith Feder, "Hospital Cost Shifting and Care for the Uninsured," **Health Affairs** 4 (Fall 1985): 67-80.

12. Preliminary data from the annual survey indicate a slight rise in operating margin for 1990, from 3.4 percent to 3.8 percent.

13. See Jack Rodgers, "Setting Medicare's Indirect Teaching Adjustment for Hospitals," **Staff Working Papers**. Washington, D.C.: U.S. Congressional Budget Office, 1989.

14. While the total amount of the Medicare disproportionate share payments is small relative to all unreimbursed care, it could in theory still have a significant effect in reducing unreimbursed care costs for certain hospitals -- if, for example, the entire billion was being allocated to hospitals with the very highest unreimbursed expense. To determine whether or not this scenario was occurring, we examined the disproportionate share data for a subset of all PPS hospitals which met three conditions: They had reported all the necessary financial data elements in the AHA Annual Survey, they could be matched through the provider identifier to hospitals in

the Prospective Payment Review Commission data set, and they used the same reporting periods in both files. This subset included about half of all PPS hospitals, accounting for about half of all disproportionate share payments ($484 million) and half ($6.6 billion) of all unreimbursed care (Medicaid shortfalls plus unsponsored care). The hospitals were divided into deciles, ranked by the level of Medicaid shortfall and unsponsored care as a percentage of expenses. For those in the highest deciles, unsponsored care and Medicaid shortfalls amounted to $1.3 billion. Disproportionate share payments covered only $0.1 billion. When the top two deciles were considered, care for the poor rose to $2.6 billion and disproportionate share payments to $0.2 billion.

TABLE 1
NATIONAL MEDICAID (MCD) PAYMENTS: 1980 – 1989
(in billions)

Registered Community Hospitals

Year	# of Hosps.	Gross Revenue			Net Revenue			Costs			Shortfall between MCD Costs and MCD Payments		
		Total Gross Patient Revenue	Gross MCD Patient Revenue	MCD as a % of Total	Total Net Patient Rev	MCD Pay-ments	MCD as a % of Total	Total Expenses	MCD Cost	MCD as a % of Total	% of MCD Costs Paid	Shortfall	Shortfall as a % of Total Expenses
1980	5828	$ 89.5	$8.8	9.8%	$73.8	$6.7	9.0%	$76.8	$7.4	9.6%	90.5%	$0.7	0.9%
1981	5812	$106.3	$10.8	10.2%	$87.2	$8.5	9.8%	$90.6	$9.2	10.1%	92.9%	$0.7	0.7%
1982	5796	$126.0	$12.4	9.9%	$101.8	$9.2	9.1%	$104.8	$10.2	9.7%	90.8%	$0.9	0.9%
1983	5782	$145.1	$14.2	9.8%	$113.5	$10.0	8.8%	$116.4	$11.1	9.5%	90.1%	$1.1	0.9%
1984	5757	$155.8	$15.3	9.8%	$121.3	$10.5	8.6%	$123.3	$11.9	9.6%	88.2%	$1.4	1.1%
1985	5729	$163.3	$16.5	10.1%	$129.7	$11.6	9.0%	$130.5	$12.8	9.8%	90.7%	$1.2	0.9%
1986	5676	$178.4	$18.6	10.4%	$137.9	$12.6	9.1%	$140.6	$14.3	10.2%	88.2%	$1.7	1.2%
1987	5597	$198.1	$20.6	10.4%	$147.3	$12.9	8.7%	$152.2	$15.5	10.2%	83.0%	$2.6	1.7%
1988	5499	$224.8	$23.4	10.4%	$161.1	$13.7	8.5%	$168.0	$17.2	10.2%	79.7%	$3.5	2.1%
1989	5448	$275.9	$27.5	10.7%	$176.9	$15.2	8.6%	$184.6	$19.4	10.5%	78.3%	$4.2	2.3%
Annual Com-pound Rate of Growth 1980 to 1989		12.5%	13.5%	0.9%	10.2%	9.6%	-0.6%	10.2%	11.4%	1.0%	-1.6%	22.1%	10.8%

SOURCE: Annual Survey of Hospitals, 1980 – 1989, American Hospital Association (includes estimated data). Medicaid cost figures are calculated for each hospital by multiplying Medicaid charge data by the estimated cost-to-charge ratio, as described in the text. The figures exclude the cases of a small number of hospitals (7 hospitals in 1989) which derive the majority of their income from tax appropriations, grants, and contributions, and have no gross patient revenues. Updates to the 1985 and 1989 survey data have resulted in figures that differ slightly from those reported previously.

TABLE 2

NATIONAL MEDICAID (MCD) PAYMENT SHORTFALLS AND UNCOMPENSATED/UNSPONSORED CARE: 1980 - 1989
(in billions)

Registered Community Hospitals

Year	# of Hosps.	Total Expenses	Shortfall between MCD Costs and MCD Payments		Uncompensated Care		Unsponsored Care		Unsponsored Care plus MCD Shortfall	
			Shortfall	Shortfall as a % of Total Expenses	Cost-Based	Cost-Based as a % of Total Expenses	Cost-Based	Cost-Based as a % of Total Expenses	in Billions	as a % of Total Expenses
1980	5828	$76.8	$0.7	0.9%	$3.9	5.1%	$2.8	3.7%	$3.5	4.6%
1981	5812	$90.6	$0.7	0.7%	$4.7	5.2%	$3.5	3.8%	$4.1	4.6%
1982	5796	$104.8	$0.9	0.9%	$5.3	5.1%	$4.1	3.9%	$5.0	4.8%
1983	5782	$116.4	$1.1	0.9%	$6.1	5.3%	$4.8	4.1%	$5.9	5.0%
1984	5757	$123.3	$1.4	1.1%	$7.4	6.0%	$5.6	4.6%	$7.0	5.7%
1985	5729	$130.5	$1.2	0.9%	$7.6	5.8%	$6.0	4.6%	$7.2	5.5%
1986	5676	$140.6	$1.7	1.2%	$8.9	6.4%	$6.9	4.9%	$8.6	6.1%
1987	5597	$152.2	$2.6	1.7%	$9.5	6.2%	$7.2	4.7%	$9.9	6.5%
1988	5499	$168.0	$3.5	2.1%	$10.4	6.2%	$8.1	4.8%	$11.6	6.9%
1989	5448	$184.6	$4.2	2.3%	$11.1	6.0%	$8.9	4.8%	$13.1	7.1%
Annual Compound Rate of Growth 1980 to 1989		10.2%	22.2%	10.8%	12.2%	1.7%	13.6%	3.0%	15.7%	5.0%

FIGURE 1

PERCENTAGE OF HOSPITALS WITH SPECIFIED LEVELS OF MEDICAID SHORTFALL AS A PERCENT OF TOTAL HOSPITAL EXPENSES

Percent of hospitals

Year of Survey

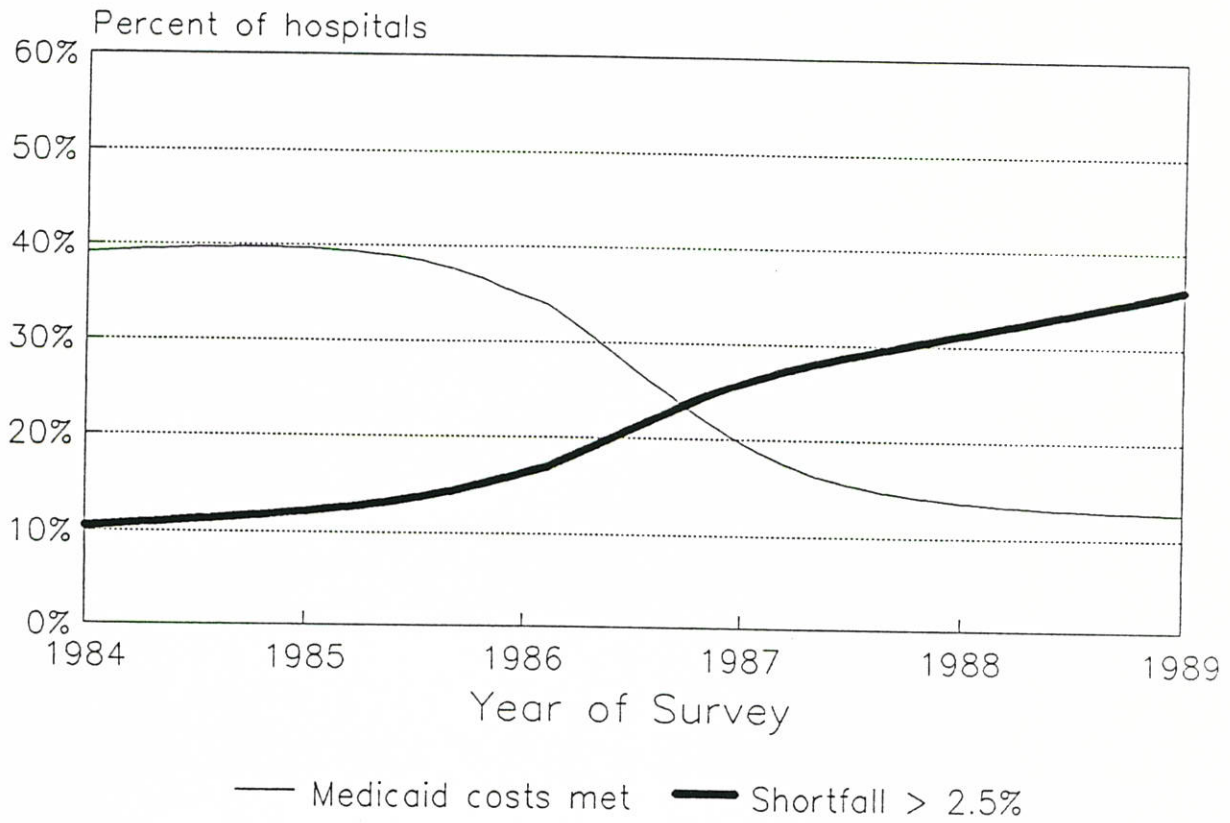—— Medicaid costs met   ▬▬ Shortfall > 2.5%

FIGURE 2

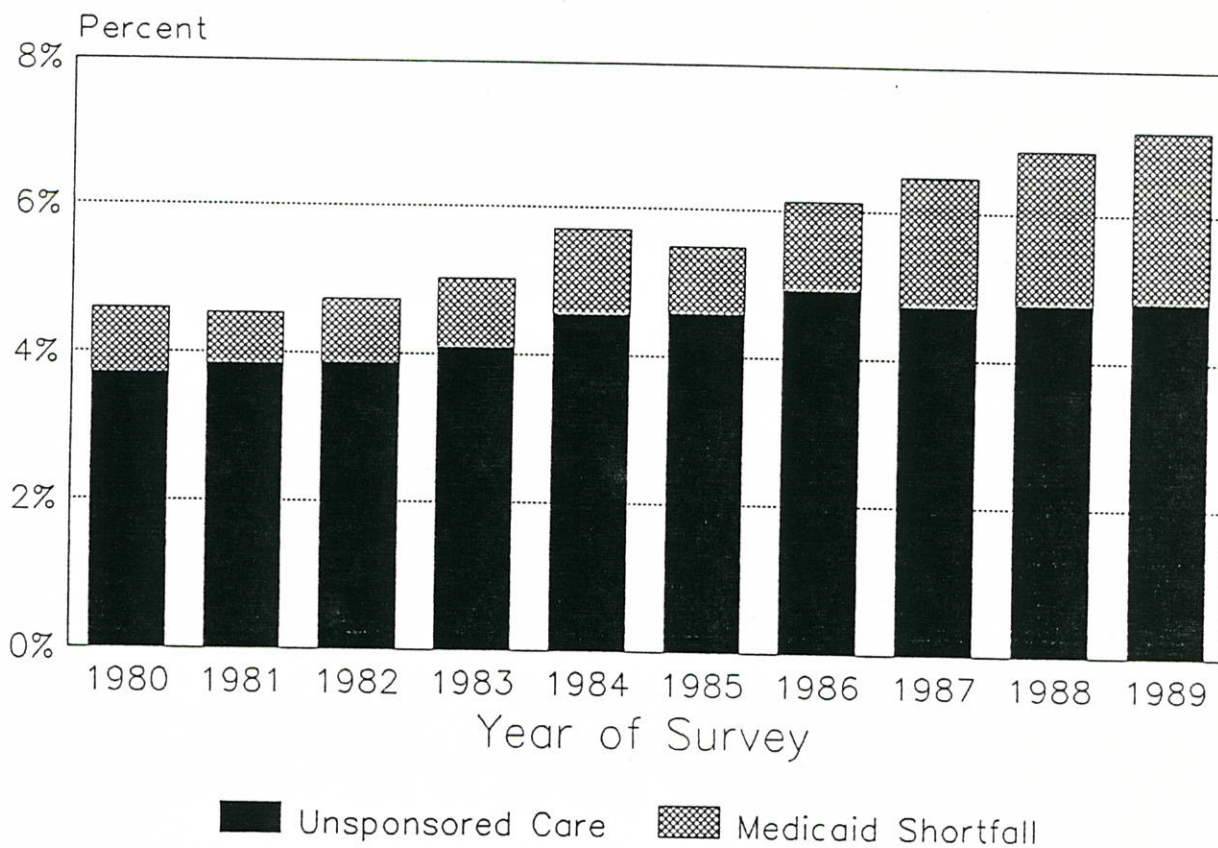**MEDICAID SHORTFALL PLUS UNSPONSORED CARE AS A PERCENT OF TOTAL EXPENSES**

FIGURE 3

DISTRIBUTION OF MEDICAID SHORTFALL PLUS UNSPONSORED CARE AS A PER-CENT OF TOTAL EXPENSES