

Loss of Medicaid and access to health services

by E. Richard Brown and Michael R. Cousineau

In this article, the authors assessed the effects of the loss of Medicaid eligibility on access to health services by the medically indigent population in two California counties. An historically derived baseline of health services received by each county's medically indigent adults under Medicaid was compared with the volume of services provided by the county to the same population after they lost Medicaid eligibility. The baseline figures

were used as an "expected" volume of services which can be compared with the actual, or "observed," volume of services. The analysis found fewer hospital discharges than expected in Los Angeles and much fewer outpatient visits than expected in Orange County, suggesting that these groups experienced substantial reductions in access related to loss of Medicaid eligibility.

Introduction

Medicaid coverage has been responsible for a substantial increase in access to and use of health services by very low-income persons (Blendon, 1986; Wilensky and Berk, 1983; Kasper, 1986). Therefore, changes in public policy that reduce Medicaid coverage for this population, even changes that make other provisions for their care, may have an adverse impact on affected groups' access and utilization. Such changes warrant careful assessment of the effects.

In 1982, California adopted major changes in State and local programs and policies that affected care to persons enrolled in the Medi-Cal (California's Medicaid) program. As part of cutbacks and a major reform in Medi-Cal and health insurance policy (Bellavita, 1983), California eliminated 250,000 "medically indigent adults" (MIAs) from Medi-Cal eligibility. The MIAs were a group of Medi-Cal beneficiaries who were not linked to the Aid to Families with Dependent Children (AFDC) or the Supplemental Security Income (SSI) public assistance aid categories; the costs of their care therefore were paid for entirely by State funds.¹ MIAs were mostly able-bodied adults between the ages of 21 and 65 whose medical bills exceeded their ability to pay. Their eligibility for Medi-Cal was thus determined by their medical indigency, that is, their financial inability to pay their medical bills. MIAs included many working poor persons and county general relief recipients. In 1983, after California had dropped one-quarter of a million persons from its MIA program, at least 29 States still offered "State-only" programs, ranging in size from 95 in South Dakota to more than 249,000 in New York and totalling more than 875,000 nationwide (Skellan and Yanek, 1985).

The State transferred responsibility to the counties for the care of MIAs, along with about 70 percent of what the State would have spent on their care had they remained in the Medi-Cal program. This specific responsibility for MIAs was added to the more general responsibility for care of indigent persons delegated by the State to the counties. These responsibilities, however,

are implemented differently by different counties.

Because the counties decide what services to offer and set their own financial eligibility standards, there is far greater variability among them in benefits, eligibility standards, and procedures than Medi-Cal recipients experience. Furthermore, some counties provide care in their own facilities, others contract with private and community providers, and others use some combination of county, community, and private providers.

This change in State policy raises some related issues. First, did the loss of Medi-Cal eligibility affect access to and use of health services by the MIA population? Second, did MIAs in different counties experience different levels of access to care related to differences in the way counties implemented their responsibilities? In summary, how has the MIA population fared in county indigent care programs compared with their prior use of health services under the Medi-Cal program?

These questions are important for several reasons. First, indigent persons and their advocates are concerned about how well access to care has been preserved under the MIA transfer implemented in different counties. Second, the State is concerned as well with how successfully the counties have fulfilled their mandate to meet the needs of MIAs in particular and indigents in general, and how well they spent tax dollars given to them by the State to help meet their obligations. Finally, it is valuable to compare counties' performances with each other and with the level of access provided under the Medi-Cal program in order to assess the effectiveness of different models of delivering care. It is useful to evaluate the effectiveness in ensuring access to necessary services among alternative policies and modes of organizing and delivering care to indigent populations. Comparisons should be made between State-level entitlement and funding county-run programs, between county-run and contracted services, between fee-for-service and managed-care models, and between detailed and presumptive eligibility screening. These issues are gaining increased prominence as the problems of the growing uninsured population compel political dialogue and debate on public policy.

Background

Loss of Medicaid

There is considerable evidence that Medicaid has been responsible historically for a substantial share of increases

¹Persons are eligible for Medicaid paid by matching Federal and State funds if they are in families with dependent children, are pregnant women, or are adults who are blind, disabled, or 65 years of age or over; and if they are sufficiently poor to meet eligibility resource limits.

Reprint requests: E. Richard Brown, Ph.D., University of California, Los Angeles, School of Public Health, Los Angeles, California 90024-1772.

in the use of health services among the poor. In 1964, 2 years before the Medicaid program began operation, poor persons averaged 4.3 physician visits per year, compared with 4.6 visits for the nonpoor. By 1973, when nearly all States were operating Medicaid programs, poor adults averaged more physician visits than nonpoor adults, and the gap between poor and nonpoor children had been reduced but not eliminated (Health Resources Administration, 1980). Despite their greater use of health services, the poor continued to have a substantial deficit compared with the nonpoor when health status is taken into account (Aday and Andersen, 1983).

Although the poor have not achieved equity with the nonpoor population, Medicaid coverage has made a clear difference in access to health services among the poor (Blendon, 1986). Wilensky and Berk (1983) found that, among poor and near-poor persons who were sick, those who were uninsured during the entire year used far fewer medical services than those who had Medicaid even part of the year. Kasper (1986) also has documented the benefits of Medicaid for use of health services by the poor who are in fair or poor health.

Few studies have attempted to assess the impact of the actual loss of Medicaid coverage. Lurie et al. (1984, 1986) prospectively studied the effects of loss of Medi-Cal coverage on access to care and on health status of a group of MIAs who had chronic illnesses, such as diabetes or high blood pressure, and who had been receiving their care at a university medical center. They also followed a comparable group of Medi-Cal patients who did not lose their coverage. They found that, at 6-month and 1-year follow-ups, the MIA group had less access to health services and were in significantly poorer health than before they lost Medi-Cal and compared with the group who were still on Medi-Cal. However, larger studies of the loss of Medicaid have not been published.

County variability

Although California historically has had an extensive system of public hospitals and health services in its 58 counties, the system had shrunk from 65 hospitals in 49 counties in 1964, to 33 hospitals in 26 counties by the end of 1982 (Brown, 1981; Office of County Health Services, 1983).

MIAs needing care in different counties face different conditions. For example, counties vary in the types of facilities made available to them. Like many other large and medium size counties that still operate their own hospitals and clinics, Los Angeles County provides care only in county facilities, except for a very limited amount of emergency and specialty care for which it will reimburse private hospitals. Orange and San Diego Counties, which have no county hospitals or county medical clinics, contract all MIA care (and other indigent health care) to university medical schools, private hospitals and clinics, and physicians. Alameda County uses its county hospitals and clinics and also contracts with a consortium of community clinics. Many other counties also use some combination of county and contract services.

In addition, most counties, including Los Angeles, do not distinguish between their MIA and other indigent

medical care responsibilities. Counties, like Orange and San Diego, that contract for services with private providers tend to maintain separate MIA and other indigent care programs, with differing eligibility, benefits, and providers for each program.

The substantial discretion given to counties to determine benefits, services, eligibility, and the share of costs imposed on patients creates still more variation among county programs. Some counties cover almost all care that had been previously available to MIAs under the Medi-Cal program, while others provide only those services that are deemed essential to prevent death or significant permanent disability. Some counties provide generous ability-to-pay (ATP) plans and procedures, while others create very restrictive ATP eligibility standards, procedures, and charges.

Finally, most small counties operate a completely different arrangement from the larger counties. Small counties (under 300,000 population) have an option of contracting back to the State which then provides a modified Medi-Cal program for eligible MIAs in that county. All counties larger than 300,000 must operate their own MIA programs.

How this variability among counties affects access to care has never been studied, in part because there have been no comparable sources of data among the counties. Each county operates its own information and data systems, collecting data for different purposes and in different ways, analyzing them differently, and reporting them in ways that makes it extremely difficult to compare the performance of one county with another. The reporting requirements to the State are extremely loose, requiring only totals of aggregated services.

Research objectives

The specific research objectives of this study were to assess whether the MIA population used more, fewer, or the same volume of health services after their transfer from the Medi-Cal program to county responsibility, and to compare the relative effectiveness of each county in providing the indigent population with access to health services. The project further sought to identify valid and practical methods of accomplishing these objectives so that the methods would be readily available for use in similar situations to county, State, and academic researchers and policy analysts with limited resources. The methods developed in this project were then applied to assess the implementation of the MIA transfer in two California counties—Los Angeles and Orange.

Methods

The research objectives involved two distinct steps. First, it was necessary to identify the MIAs and the groups included in a given county's program—that is, whether the county combines the former MIA group with other indigent medical responsibilities or keeps them separate. It was necessary to assess the ongoing impact of the change on the population of people who would have qualified as MIAs before the transfer, but who may or may not personally have been MIAs under the Medi-Cal program. This population orientation is relevant because

former individual MIAs may no longer have needed medical financial assistance in 1983 and beyond, while new patients not eligible in 1982 might have become medically indigent in 1983 or in subsequent years. (The legislation took account of this by requiring the counties to adopt eligibility standards for their county medical care programs to ensure that future indigent patients could become eligible for county subsidies.) Therefore, the MIA population for whom a county became responsible in 1983 included adults in each county who were not linked to categorical welfare programs but who were at risk for medical indigency, rather than the particular group of individuals who lost Medi-Cal eligibility in 1982.

Second, an indicator of health care needs was identified that would serve as a standard for comparisons between the Medi-Cal program and different counties' health services. Perhaps the ideal method would have been to assess actual needs by conducting a survey of MIAs both before and following the transfer, obtaining clinically relevant information on health status and measures of factors related to access. This method would permit an assessment of the population's health status, their sources of medical care, their patterns of utilization, and their unmet medical needs. Comparing data collected before and after the MIA transfer would enable researchers, policymakers, beneficiaries, and the public to assess accurately the effects of the MIA transfer on access to care and on health status. However, this approach is quite expensive, particularly when conducted on a large scale. Although one study using this approach was conducted on a relatively small group of MIAs at one university medical center (Lurie et al., 1984, 1986), resources were never provided for a larger scale study.

Because of the limitation on resources, the retrospective nature of the study, and the focus on the population of MIAs rather than on individual MIAs, we adopted an alternative approach that relied on existing available data. We developed estimates of the health care needs of the MIA population based on their historical use of health services. This permitted us to compare the volume of services used by this population (and paid for by Medi-Cal before the transfer) with the volume of services they used in county indigent medical services (IMS) programs after the transfer. This historical method assumes that this population group's need for services remained about the same per eligible person after the transfer to county responsibility as it had been under the Medi-Cal program.

The historical method adopted in this study used the rates of utilization by the MIA population when they were in Medi-Cal as the standard of need against which subsequent usage would be assessed. However, the former utilization rates of MIAs in Medi-Cal had to be adjusted to control for changes in rates of utilization by persons remaining in the Medi-Cal program. These are primarily the result of changes in definitions of medical necessity and treatment authorization requirements imposed on doctors and patients by the State. The adjusted Medi-Cal rate of use was the "expected" rate at which this population would use county-funded services after the transfer. The expected rate was then compared with the services that actually were used in the county program, what we call the "observed" utilization. We

then calculated a ratio of observed-to-expected utilization to indicate whether the county provided more or less treatment to the MIA/indigent population after the transfer than they would have expected to receive had they remained eligible for Medi-Cal.

The following formula represents this conceptual relationship:

$$\frac{U_o}{U_e} = \frac{I_s + IMS_s}{I_b + MIA_b}$$

where,

- U_o = observed (i.e., actual) utilization,
- U_e = expected utilization,
- I_s = county-subsidized outpatient units of service (visits, inpatient days, or discharges) under Welfare and Institutions section 17000 responsibilities (general indigent care program) in study year (if separate from IMS program),
- I_b = county-subsidized outpatient units of service (visits, inpatient days, or discharges) under Welfare and Institutions section 17000 responsibilities in baseline year,
- IMS_s = county-subsidized outpatient units of service (visits, inpatient days, or discharges) under County Indigent Medical Services program for former MIA population, and
- MIA_b = Medi-Cal MIA outpatient units of service (visits, inpatient days, or discharges) for County in baseline year, adjusted.

The computational method, based on this conceptual formula, is described in sufficient detail for the general reader. (A more detailed description and tables are provided in an Appendix that is available from the authors upon request.)

The expected utilization of services is developed from State Medi-Cal paid claims data (specifically, the number of MIA Medi-Cal inpatient days, discharges, or outpatient visits) in calendar year 1982 (California Center for Health Statistics, 1982).² Calculating this expected volume of use required adjusting the crude historical Medi-Cal MIA data to eliminate from the estimate the volume of services used by groups that did not lose Medi-Cal eligibility,³ and by adjusting for gross population changes. Inpatient use was estimated by combining paid claims for acute medical, surgical, intensive care unit, and coronary care unit services.⁴ We used the number of monthly inpatient users to represent the number of inpatient discharges per month.⁵ Outpatient utilization was estimated by combining hospital outpatient and emergency room visits and physician office visits. Both outpatient and inpatient

²We included three provider categories: physician office services, county hospital inpatient and outpatient services, and community hospital inpatient and outpatient services.

³Three groups remained Medi-Cal MIAs after the transfer of the other 250,000 MIAs: pregnant women, patients in long-term care facilities, and those who appealed their termination from Medi-Cal and remained eligible pending the outcome of their appeals (most of this last group eventually lost their appeals). Together, these patients represented less than 10 percent of the 1982 monthly eligible counts of MIAs.

⁴We thus eliminated from the expected volume those claims which paid for care to obstetrics patients, long-term care patients, and patients in psychiatric facilities, all of whom remained in the Medi-Cal program.

⁵We assumed that most inpatient users were admitted and discharged within a 30-day period and only once within that period.

use volumes were then reduced by appropriate percentages of 1982 MIA eligibles who remained Medi-Cal beneficiaries in 1983.⁶ These figures were then adjusted for increases in the county's total population from the baseline year to the study year.

The observed (or actual) utilization of services under the county MIA programs is derived from county data. We obtained information about each county's MIA program—eligibility for free or reduced-fee care, the types of services provided under the program, and the types and numbers of county and community providers included in the program. We then obtained service data from the county, broken down by patient's source of payment and covering the utilization of inpatient and ambulatory care at all providers covered by the county's MIA program. We were dependent on the data that were collected and made available by each county, and had to adjust our method accordingly. These data were then analyzed to combine service data for indigent and MIA patients, and to sum the data separately for patients in other payment categories.

Adaptations of methods to each county

Because of the differences in the indigent care systems in Los Angeles and Orange Counties and in the way they collect and report data, the method for deriving the expected volume of utilization and for compiling observed utilization data had to be adapted to each county. The specific methods used in each county are described briefly in this article. (A more thorough discussion is provided in an Appendix that is available from the authors upon request.)

Los Angeles County

Because Los Angeles County's MIA program was combined with its other indigent care responsibilities, and services were restricted to County Department of Health Services (DHS) facilities, we had to compute the effects on the total volume of DHS services of two important changes: MIAs who had been served by the county as Medi-Cal patients and now would be "non-third party" patients, and MIAs who, as Medi-Cal patients, had used private or community providers and now would be non-third party users of county facilities.

We based the expected utilization figures on total volume of use of county facilities in the baseline year, fiscal year (FY) 1981-82, plus the utilization by MIAs of private physicians and hospitals in that year. These figures were adjusted to account for those MIAs who remained in the Medi-Cal program,⁷ and for differences in the average length of stay between private and county hospitals. We computed the total expected volume of use for all patients, and the expected volume of use for three

separate source-of-payment categories: Medi-Cal, other third party (Medicare and private insurance), and non-third party (self-pay and sliding fee-scale). We used these three categories to permit an assessment of the extent to which changes in total volume of services reflect contributions by Medi-Cal patients (that is, all Medi-Cal patients other than MIAs who lost their eligibility), those with some other public or private coverage, and those who are medically indigent (that is, former MIAs and former county indigent patients who together comprise the present medically indigent population). We then compared the observed volume of use with the expected volume of use in FY 1982-83 and beyond by computing a ratio which reflects the degree to which the observed use equals, exceeds, or is smaller than the expected utilization.

Because reliable data on outpatient services by source of payment were not available from Los Angeles County, we could apply this method only to inpatient utilization. We estimated the change in volume of inpatient services attributable to MIAs by comparing the observed utilization by county indigent patients (that is, users of county DHS facilities without third-party coverage) with the expected utilization anticipated following the MIA transfer (that is, the changes in total volume of use and changes in each of the three source-of-payment categories attributable to the MIA transfer). Although we present findings for both inpatient discharges (or admissions) and days, the former are a better measure of access to inpatient hospital care than the latter. Discharges represent actual access to the hospital for an episode of illness, while the volume of inpatient days is influenced by average length of stay which is related to quality of care, an issue we do not address in this study.

Orange County

In Orange County, which has no county-owned hospital or medical clinics, all MIAs were treated in the University of California medical center, in private hospitals, in licensed clinics, or by private practitioners. Thus, estimates of the expected volume of inpatient and outpatient use were based simply on the 1982 average monthly Medi-Cal MIA discharges, inpatient days, and outpatient visits for Orange County providers. However, Orange County reports inpatient days and outpatient visits for its IMS program, but it does not report admissions or discharges. Therefore, we were limited to comparing expected and observed inpatient days, clearly a less desirable measure of access to inpatient care (as previously noted).

The computation of expected and observed volume of use are much simpler in Orange County than in Los Angeles. In Los Angeles, the expected utilization volumes of inpatient and outpatient services were based on corresponding volume of use by MIAs in the Medi-Cal program during the baseline year, 1982. In Orange County, we were able to generate a reasonably precise expected value because both Medi-Cal and IMS differentiated outpatient visits into comparable categories. Because all services were provided in noncounty settings under both the Medi-Cal MIA and County IMS programs, no adjustments were needed to account for transfers from private providers to county services. Furthermore,

⁶The inpatient and outpatient totals were reduced by different percentages because of the adjustments already made to inpatient data. Dental, psychiatric, and other practitioner visits were not included in computing the expected volume in this analysis because the counties generally count them under different programs to the extent that they are provided at all. Other adjustments made to expected use data were specific to each county and will be described later in this article.

⁷These included pregnant women, long-term care patients, and recipients who were in the process of appealing their termination.

because we were concerned with only those services for which the county is financially responsible—that is, those billed to the IMS program—we included in our analysis only those services reported by the IMS program, rather than services delivered by community providers under other source-of-payment categories.

However, Orange County's data for the first 6 months of its IMS program were unusable. As discovered in the course of our study (and acknowledged by the county), the county's management information system produced data that were unreliable for the period from January through June 1983 (Orange County Health Care Agency, 1986; Maxwell, 1987). Therefore, we have deleted this period from our analysis and focused on the subsequent 2 fiscal years.

Limitations of the method

The most striking finding from this study is the difficulty of assessing differences between MIAs' experiences in the Medi-Cal program and in county IMS programs because of the dismal state of data systems for county health services. The problems with Los Angeles and Orange Counties' data systems are not exceptional among counties, but they make evaluation and comparative studies of performance exceedingly difficult. These problems include a failure to collect important types of data such as specific type of service, source of payment, and patient's income and relevant demographic characteristics; differences in method of collecting similar data among counties and even within counties; and a lack of a clear definition of method of collecting important data elements.

In addition, there are at least five other limitations in the methods used in this analysis. First, the data used to derive the expected volume of use reflect the historical use of services by MIAs, rather than measure present needs for medical care. They are, nevertheless, a useful surrogate for direct measures because they reflect the previous demand for care under a system that, with its many imperfections, provides a floor below which access to care should not fall. Because it is historically based, analyses using this method have a short life span resulting from changes in the composition of the population and/or the health-related environment. Although we have adjusted the expected volume of services for changes in county population, we have applied this analysis of historical use for only 2 fiscal years beyond the fiscal year in which the transfer occurred.

Second, the expected volume of use was calculated using data published in reports from the Medi-Cal paid claims data file. This file represents claims paid in a given month, rather than services actually provided in that month. (This limitation, discussed more fully in the Appendix, should not significantly affect the findings.)

Third, the expected volume of care has not been adjusted to account for utilization controls imposed by other changes in the Medi-Cal program, such as the more stringent definition of medical necessity, increased use of treatment authorization requests, and increased share of cost imposed on beneficiaries. The State's Center for Health Statistics was not able to provide data from which such an adjustment factor could be computed. Thus, the expected volume of services does not fully reflect the

level of service that would likely be used by the group of MIAs had they remained in the current Medi-Cal program.

Fourth, the observed volume of services reflects utilization of only those services provided or paid for by the county. It does not include charity or uncompensated care in private or community facilities, or services paid for by MIAs or other indigents. Other studies have shown that some MIAs received care from private physicians for which they paid in full at the time of service or in installment payments, while others obtained reduced-fee or free care from community clinics. The Medi-Cal data, from which expected volume of service was computed, do not reflect other services for which MIAs paid or received as charity, although MIAs paid for less charity care and services under the Medi-Cal program than after their transfer.

Although this limitation prohibits us from taking account of all care received by former MIAs, our concern was whether the counties were adequately replacing the care previously paid for by the State Medi-Cal program. If former MIAs have to pay for necessary care they previously received without charge, then they are spending more of their meager financial resources on medical care, an unintended consequence of the MIA transfer. Moreover, if a significant portion of their care is provided as uncompensated care by hospitals and community providers, then the resulting financial burden represents an unanticipated shift of costs to private and community health care providers, many of whom may further restrict access to care for the uninsured.

Finally, notwithstanding our attempts to standardize measures of county performance, it remains difficult to compare counties' success and inadequacies in providing care to MIAs. Since there is no standardized collection and reporting of utilization data by MIAs in California counties, differences among the counties may reflect differences in measurement (that is, idiosyncrasies in their data collection and reporting), as well as differences in their eligibility guidelines, and in the ways they deliver medical care to MIAs.

With such problems, our findings are subject to error, the magnitude of which cannot be estimated. We have included only those analyses that are based on reasonably complete and verified data. Nevertheless, it would be precarious to draw conclusions too firmly from these data. Indeed, we suggest that any conclusions should be based on large differences and should be viewed as suggestive, requiring further verification by other methods before being accepted. Some of our findings did meet these stringent criteria.

Findings

Los Angeles

Tables 1 and 2 display the summary findings for changes in discharges and inpatient days at Los Angeles County DHS hospitals between FY 1981-82 and FY 1983-84. Total discharges increased in both fiscal years, consistent with the expected increase for each year—from 129,986 in FY 1981-82, to 143,253 in FY 1982-83 (an increase of 10.2 percent), and 150,359 in

Table 1

Expected and observed number of discharges from Los Angeles County Department of Health Services Hospitals, by source of payment: Fiscal Year (FY) 1981-82 to 1983-84

Number of discharges	Source of payment			
	Total	Medi-Cal	Other third-party	Non-third-party
FY 1981-82				
Observed discharges	129,986	72,921	18,783	38,282
FY 1982-83				
Observed discharges	143,253	67,621	19,850	55,782
Change from FY 1981-82	+13,267	-5,300	+1,067	+17,500
Percent change from FY 1981-82	+10.2	-7.3	+5.7	+45.7
Expected discharges	144,979	56,675	19,065	69,239
Observed/expected ratio	0.99	1.19	1.04	0.81
FY 1983-84				
Observed discharges	150,359	61,955	21,568	66,836
Change from FY 1981-82	+20,373	-10,966	+2,785	+28,554
Percent change from FY 1981-82	+15.7	-15.0	+14.8	+74.6
Change from FY 1982-83	+7,106	-5,666	+1,718	+11,054
Percent change from FY 1982-83	+5.0	-8.4	+8.7	+19.8
Expected discharges	153,292	48,570	19,290	85,432
Observed/expected ratio	0.98	1.28	1.12	0.78

SOURCES: Los Angeles County Department of Health Services, Inpatient Statistical Reports for FY 1981-82, FY 1982-83, and FY 1983-84; California Center for Health Statistics, (1982); and California Center for Health Statistics, (1982, 1983).

Table 2

Expected and observed number of inpatient days in Los Angeles County Department of Health Services Facilities, by source of payment: Fiscal Year (FY) 1981-82 to 1983-84

Number of inpatient days	Source of payment			
	Total	Medi-Cal	Other third-party	Non-third-party
FY 1981-82				
Observed inpatient days	924,305	530,615	200,422	193,268
FY 1982-83				
Observed inpatient days	964,658	481,931	199,686	283,041
Change from FY 1981-82	+40,353	-48,684	-736	+89,773
Percent change from FY 1981-82	+4.4	-9.17	-0.4	+46.5
Expected total days	1,040,359	402,729	203,428	434,202
Observed/expected ratio	0.93	1.20	0.98	0.65
FY 1983-84				
Observed inpatient days	978,446	423,760	205,190	349,496
Change from FY 1981-82	+54,141	-106,855	+4,768	+156,228
Percent change from FY 1981-82	+5.9	-20.1	+2.4	+80.8
Change from FY 1982-83	+13,788	-58,171	+5,504	+66,455
Percent change from FY 1982-83	+1.4	-12.1	+2.7	+23.5
Expected total days	1,104,357	338,764	205,533	559,759
Observed/expected ratio	0.89	1.25	0.99	0.62

SOURCES: Los Angeles County Department of Health Services, Inpatient Statistical Reports for FY 1981-82, FY 1982-83, and FY 1983-84; California Center for Health Statistics, (1982); and California Center for Health Statistics, (1982, 1983).

FY 1983-84 (a 1-year increase of 5.0 percent). The observed-to-expected ratio of 0.99 in the first fiscal year indicates that total observed, or actual, discharges were just 1 percent less than the volume that was expected as a result of the MIA transfer, and the ratio of 0.98 in the second fiscal year was just 2 percent less than expected.

Examining the changes within each source-of-payment category from FY 1981-82 to FY 1982-83 (Table 1), we find that discharges of Medi-Cal patients declined with the elimination of MIAs from Medi-Cal (-7.3 percent), while discharges of other third-party patients increased slightly (5.7 percent), and discharges of non-third-party

patients (essentially, the medically indigent group) increased dramatically (45.7 percent). However, these absolute and percent changes, while in the expected direction, are less dramatic when compared with the expected magnitude of change. Medi-Cal discharges decreased less than expected, other third-party discharges increased more than expected, but non-third-party patients increased substantially less than expected. Thus, while the observed-to-expected ratio for total discharges was 0.99 (that is, almost exactly what was expected), the ratio for Medi-Cal discharges was 1.19 (19 percent above the expected volume), 1.04 for other third-party discharges

Table 3**Expected and observed number of inpatient days in Orange County Indigent Medical Services Program: Fiscal Year (FY) 1983-84 and FY 1984-85**

Number of inpatient days	1983-84	1984-85
1982 Medi-Cal MIA days	32,082	32,082
Expected days, adjusted for MIAs who remain in Medi-Cal	31,581	32,419
Observed days paid by IMS	26,709	27,369
Observed/expected days	0.85	0.84

NOTES: MIA is medically indigent adults. IMS is indigent medical services.

SOURCES: California Center for Health Statistics, (1982); California Center for Health Statistics, Cumulative Certified Eligibles, 1982 and 1983; and Orange County Health Care Agency (1986).

Table 4**Expected and observed number of outpatient visits in Orange County Indigent Medical Services Program: Fiscal Year (FY) 1983-84 and FY 1984-85**

Number of outpatient visits	1983-84	1984-85
1982 Medi-Cal MIA visits	157,162	157,162
Expected visits, adjusted for MIAs who remain in Medi-Cal	149,229	153,187
Observed visits paid by IMS	32,112	40,690
Observed/expected visits	0.22	0.27

NOTES: MIA is medically indigent adults. IMS is indigent medical services.

SOURCES: California Center for Health Statistics (1982); California Center for Health Statistics, and Orange County Health Care Agency (1986).

(4 percent above expected), and 0.81 for non-third-party discharges (19 percent below expected).

Changes in Medi-Cal and non-third-party discharges during the next fiscal year also were not as large as expected (Table 1). Between FY 1982-83 and FY 1983-84, Medi-Cal discharges declined by 8.4 percent while non-third-party discharges increased by 19.8 percent, but these amounted to observed-to-expected ratios of 1.28 (28 percent above expected) for Medi-Cal and 0.78 (22 percent below expected) for non-third-party. Thus, changes in hospital discharges indicate that former MIAs and other indigent patients used about one-fifth fewer hospital services in the 2 years following the transfer than they did before it.

Total inpatient days of hospitalization also increased between FY 1981-82 and FY 1983-84, but not as much as expected (Table 2). As with discharges, Medi-Cal inpatient days decreased in each fiscal year but were 20 percent greater than expected in FY 1982-83 and 25 percent greater than expected in FY 1983-84. Other third-party days were near the expected level in both fiscal years. However, non-third-party days, while increasing substantially in both fiscal years, were still 35 percent below expected volumes in FY 1982-83 and 38 percent below the expected level in FY 1983-84. Thus, compared with discharges, changes in inpatient days indicate a bigger gap between the volume of services that former MIAs and other indigent patients would have been expected to use and the volume they actually used. However, little importance should be attached to this finding both because average length of stay declined in county as well as in other hospitals, and because discharges is a more relevant measure of access than patient days.

Orange County

The number of days of hospitalization paid for by the IMS program fell short of the expected number in both

FY 1983-84 and FY 1984-85 (Table 3). In the first fiscal year, the ratio was 0.85 (15 percent below expected) and in the second, 0.84 (16 percent below expected). Because of declining average length of stay, Orange County's ratios of expected-to-observed discharges (which are unavailable) for IMS patients are probably somewhat closer to 1.0 than are the ratios for inpatient days.

The number of outpatient visits paid for by the IMS program was dramatically different from the expected number (see Table 4). In FY 1983-84, the observed total of 32,112 was only 22 percent of the expected number of 149,224 (or 78 percent below the expected level), while in FY 1984-85, it reached 40,690, or only 27 percent of the expected volume. That is, the outpatient visits provided by the Orange County IMS program was only about one-fourth of that which the medically indigent patients would have been expected to receive under the Medi-Cal program.

Discussion**Los Angeles County**

Los Angeles maintained data on inpatient days and discharge, but did not provide usable outpatient data for the large system of county health services. While total discharges reached expected levels, service to more Medi-Cal patients than expected contributed to observed total discharges. This excess volume of Medi-Cal patients may result from more intensive efforts by the county to process patients into other Medi-Cal eligibility categories (e.g., disabled or AFDC) than when the MIA category was formerly available. It could also stem from a concentration of Medi-Cal inpatients in county hospitals because of Medi-Cal's selective contracting for hospital care that took effect in the first half of 1983, possibly indicating "dumping" of Medi-Cal patients by other hospitals with Medi-Cal contracts.

Although outpatient data for all county health facilities could not be analyzed in the same ways as inpatient care, monthly data for the three major comprehensive ambulatory care clinics were obtained for the first fiscal year. These data confirmed that during the 8 months of FY 1982-83 in which the county was responsible for the MIAs as well as for its previous load of other indigent patients, non-MIA Medi-Cal visits increased rather than decreased, and non-third-party visits increased in number but not in proportion to all visits to these health centers. Total non-third-party visits increased from 11,298 (81.9 percent of all visits) in November 1982, to 12,703 (78.5 percent of all visits) in January 1983, to 14,543 (78.4 percent of all visits) in June 1983. In this same period, Medi-Cal visits increased from 1,284 (9.3 percent of all visits) in November, to 1,982 (12.2 percent of all visits) in January, and 1,902 (10.3 percent of all visits) in June⁸. Although these three large health centers may not have been representative of all county facilities or of later periods for which comparable data are not available, these data do support the tentative conclusion that ambulatory care for the medically indigent did not keep pace with expected volumes of service.

The one finding that meets the criteria of large differences and some indirect confirmation from other sources is that inpatient care of medically indigent persons did not rise to expected levels in either FY 1982-83 or 1983-84. The number of the medically indigent being discharged reached only about four-fifths of the expected level, suggesting that barriers may discourage access to inpatient care. These barriers may be financial, resulting from inadequate implementation of the county's ability-to-pay program, or be due to the more centralized and geographically limited access to the six county hospitals compared with previous availability of numerous and widely distributed public and private providers under the Medi-Cal program. Other studies have demonstrated that access to ambulatory care has been restricted in Los Angeles County facilities (Lurie et al., 1984, 1986; Cousineau, Brown, and Freedman, 1987).

Orange County

The Orange County findings also suggest diminished access for MIAs. While the observed number of inpatient days seems reasonably close to the expected level, especially given the decline in average length of stay, the number of outpatient visits paid for by the IMS program reached only about one-fourth of its expected level. This finding confirms the results of an Orange County study that found significant barriers to access to necessary medical care for medically indigent patients (Rucker et al., 1986). This confirmation from other evidence suggests that medically indigent persons in Orange County may face a serious access problem when they try to obtain ambulatory care.

One explanation for inpatient care coming closer to its expected level than ambulatory care is the restriction placed on services provided by the program. The county

limited the scope of covered services to those deemed medically necessary and defined these as "necessary to protect life, to prevent significant disability or to prevent serious deterioration of health" (Orange County Indigent Medical Services Agreement). Only services that meet this definition are reimbursable under the IMS program. However, since eligibility generally is determined after a user is referred to the County Department of Social Services (DSS), persons who are eligible on the basis of income or financial resources may not be referred, or if referred may be denied eligibility, because their medical problem does not meet the criteria.

Probably more important than the definition of medical necessity in explaining the difference between the observed-to-expected ratios of inpatient and outpatient care is the eligibility process for the IMS program that was in effect in Orange County during the period under study. Unlike Los Angeles, which provides care only in its six county hospitals and more numerous clinics and health centers, Orange County provides care through contracts with 34 hospitals and clinics and many doctors' offices dispersed throughout the county.

In order to become eligible for the IMS program, patients had to visit a contract hospital for an illness or injury. The provider was required to screen the patient for third-party coverage, and refer those with no coverage and no ability to pay to the County DSS eligibility worker for IMS eligibility determination. Then, the person had to be screened by the eligibility worker or (if none was present at the hospital) appear at the DSS office, complete an application, and provide substantial documentation. Once approved, a person remained eligible for 3 months unless he or she submitted a "status report" which automatically extended eligibility for an additional 3 months. Available evidence suggests that the number of people who submitted status reports was very small. Thus, the most likely point at which a person would be evaluated for eligibility was upon presentation at a contract hospital, which then had an incentive to refer uninsured patients for IMS determination to avoid either refusing treatment to the patient or providing treatment without compensation.

However, in FY 1983-84, only 42.2 percent of the 24,875 patients referred by providers for DSS eligibility screening actually applied. Two-thirds of the applicants were approved, or a little more than one-fourth of those referred to DSS. About the same proportion applied and were approved in FY 1984-85. The resulting monthly average of slightly more than 4,000 IMS eligibles in each year was a little more than one-third of what would have been expected, given the monthly average of 11,919 eligible Medi-Cal MIAs in the last quarter of 1982. (The expected number is actually 11,037 after adjusting for those MIAs who remained eligible in 1983.) (Orange County Health Care Agency, 1986; California Center for Health Statistics, 1982). Thus, fewer persons are eligible for IMS-funded care than would be expected as a result of transferring patients from Medi-Cal to county responsibility. (Beginning in July 1986, the eligibility process was substantially simplified to reduce access barriers.)

County officials have suggested that many patients for whom the county does not have to pay actually do

⁸Source of payment data was provided by the Los Angeles County Department of Health Services.

receive care (Maxwell, 1987). Although the county does not provide utilization data on patients who are referred but do not apply for IMS, or who apply but are denied eligibility, it would seem that this phenomenon could reduce access. In the short run, some indigent patients receive care as providers treat uninsured indigent patients without any assurance of payment. However, providers who do not get paid for the care they provide to three-fourths of their uninsured patients are likely to begin to deny care to the uninsured, rather than risk financial losses from uncompensated care. It appears that providers in Orange County have protected themselves against uncompensated care by limiting access to uninsured patients. After this study was completed, Orange County officials provided new summary data indicating improvements in inpatient and outpatient volume of care for FY 1985-86 (Rosenzweig, 1987; Allen, 1987).

Conclusions

Two general conclusions emerge from this study. First, it is clear that county health services need to improve their data systems. Although these systems may meet internal management needs, they do not permit evaluation of county fulfillment of State mandates. They do not permit State government or legislators, the public, or advocates for the low-income population served mainly by county health systems to assess how well counties are meeting community health needs.

Counties collect and report data in almost as many ways as there are counties. It was, therefore, not possible to assess the relative effectiveness of these two counties—or for that matter, any two or more counties—in meeting indigent health care needs. This failure was due, in part, to deficiencies in the data, which precluded a complete analysis of expected-to-observed use of inpatient care in Orange County, and the virtual absence of adequate outpatient data for Los Angeles County. Of course, effectiveness should be judged on quality of care provided, which was not considered by this project, in addition to access to care, which was the main object of study.

Methodological problems make it difficult to assess counties' performance and even more difficult to compare their effectiveness. Services can be provided without data, but State and local governments can be held accountable to meet the health needs of their communities only if adequate data are available by which to assess their efforts.

Fortunately, since this study was completed, California has adopted statewide uniform standards for counties to use in collecting and reporting health services data. In 1990, \$10 million was made available to the counties to implement these new reporting requirements. This Medically Indigent Care Reporting System (MICRS) stands as a model data system for indigent care services, trying to generate adequate data to assess performance but not to overburden county health systems with expensive and unessential data requirements. MICRS requires counties to collect and report individual-level demographic, income, source-of-payment, utilization, and expenditure data (Abbott, 1989). With this system in operation, the State and advocates for the poor will be

able to hold the counties more accountable for care to populations in need, as well as to compare the relative effectiveness of counties and different models of providing care.

The second general conclusion that is apparent even from the analysis of the limited data available for this study is that the transfer of medically indigent adults from Medi-Cal to county responsibility reduced the access of at least some low-income persons. While many medically indigent patients received care from the two counties, as a group such persons did not receive the volume of care they would have been expected to receive under the Medi-Cal program. Given the many utilization controls that were in effect under Medi-Cal before the transfer, it is unlikely that, as a group, they received an excessive amount of care when covered by Medi-Cal. Rather, our findings together with those of other studies indicate that medically indigent persons have experienced reduced access compared to Medi-Cal and less care than would be medically indicated.

Furthermore, the elimination of MIAs from Medi-Cal added one-quarter of a million persons to the ranks of the uninsured, one-sixth of the increase in California from 3.5 million in 1979 to 5.1 million in 1986. Government spending did not keep pace with the rapid growth in the number of low-income uninsured persons with the result that in just 3 years, State and county inflation-adjusted spending per medically indigent person in California fell 9 percent (Brown et al., 1988). Despite the seeming wisdom of this programmatic change when it was enacted in 1982, by the end of the 1980s it was apparent that it had eroded access to care for the affected population and added to the already growing uninsured population in the State, exacerbating problems which California is now struggling to address.

With large uninsured populations, and growing problems of their access and uncompensated care costs, States should consider carefully the likely consequences of proposals to eliminate State-funded Medicaid eligibility for the medically indigent.

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References

- Abbott, P.: County Health Services Branch. Personal Communication to the County Board of Supervisors. Nov. 29, 1989.
- Aday, L.U., and Andersen, R.: Equity of access to medical care: A conceptual and empirical overview. In *Securing Access to Health Care: The Ethical Implications of Differences in the Availability of Health Services*. Vol. 3:19-54. Washington. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, 1983.

- Allen, J.R.: Orange County Health Care Agency. Personal communication. Santa Ana, California, Mar. 31, 1987.
- Bellavita, C.: California's health policy reform and the poor. *Public Affairs Report*, (24):1-9, 1983.
- Blendon, R.J., Aiken, L.H., Freeman, H.E., et al: Uncompensated care by hospitals or public insurance for the poor: Does it make a difference? *New England Journal of Medicine* 314(18):1160-1163, 1986.
- Brown, E.R.: *Public Medicine in Crisis: Public Hospitals in California*. California Policy Seminar Monograph No. 11. Berkeley. Institute for Governmental Studies, University of California, 1981.
- Brown, E.R., Valdez, R.B., Morgenstern, H., et al.: *Changes in Health Insurance Coverage of Californians, 1979-1986*. Berkeley. California Policy Seminar, University of California, Aug. 1988.
- California Center for Health Statistics: Annualized data from the Medi-Cal Service and Expenditure Month-of-Payment Reports, 1982.
- California Center for Health Statistics: Data from cumulative certified eligibles, October 1982 to March 1984. California, 1984.
- Cousineau, M.R., Brown, E.R., and Freedman, J.E.: Access to free care for indigent patients in Los Angeles: County policy implementation and barriers to care. *Journal of Ambulatory Care Management*, 10(1):78-89, 1987.
- Health Resources Administration: Health of the Disadvantaged, Chart Book II. DHHS Pub. No. (HRA) 80-633. Washington. U.S. Government Printing Office, Sept. 1980.
- Kasper, J.D.: Health status and utilization: Differences by Medicaid coverage and income. *Health Care Financing Review*, Vol. 7, No. 4. HCFA Pub. No. 03223. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, July 1986.
- Lurie, N., Ward, N.B., Shapiro, M.F., and Brook, R.H.: Termination from Medi-Cal—does it affect health? *New England Journal of Medicine* 311(7):480-484, 1984.
- Lurie, N., Ward, N.B., Shapiro, M.F., et al.: Termination of Medi-Cal benefits: A follow-up study one year later. *New England Journal of Medicine*, 314(9):1266-1268, 1986.
- Maxwell, M.E. Orange County Health Care Agency. Personal communication. Santa Ana, California. Jan. 14, 1987.
- Office of County Health Services: County Health Trends and Services Report. Department of Health Services. Sacramento, Jan. 1983.
- Orange County Health Care Agency: Indigent Medical Services Program Management and Summary Statistics, Fiscal Years 1983-84 and 1984-85. California. July 1986.
- Rosenzweig, H. Orange County Health Care Agency. Personal communication. Santa Ana, California, Feb. 18, 1987.
- Rucker, L., Akin, B., Heidi, G., et al.: The medically indigent of Orange County: A study of patients who cannot obtain medical care. Orange County Task Force on Indigent Health Care. California. Oct. 10, 1986.
- Skelkan, D., and Yanek, J.: *Program Characteristics, 1984*. Health Care Financing Program Statistics. HCFA Pub. No. 03204. Office of the Actuary, Health Care Financing Administration. Washington. U.S. Government Printing Office, Aug. 1985.
- Wilensky, G.R., and Berk, M.L.: Poor, sick, and uninsured. *Health Affairs*, 2(2):91-95, Summer 1983.