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BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Honorable Henry Bellmon United States Senate

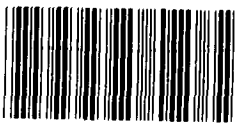
HRD-80-42

Savings Claimed For The Oklahoma Hospital Utilization Review System Were Overstated

The estimated savings claimed for the system used to assess Medicare and Medicaid hospital utilization in Oklahoma were overstated.

The estimated savings were based on incomplete and inaccurate Medicare and Medicaid population and hospital claims data. In addition, the estimates did not consider such factors as the cost of operating the review system, the fixed cost of maintaining an empty hospital bed, and the cost of offsetting charges for alternate forms of care, such as skilled nursing care.

Although estimates based on corrected data show that hospital utilization decreased during the operation of the Oklahoma Utilization Review System, other factors may have contributed to the decline.



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HRD-80-42
JANUARY 11, 1980

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

HUMAN RESOURCES
DIVISION

B-197131

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The Honorable Henry Bellmon
United States Senate

Dear Senator Bellmon:

As you requested, we have reviewed the estimated savings resulting from the operation of the Oklahoma Utilization Review System. We believe that the calculations made by the Oklahoma Foundation for Peer Review, the group responsible for this system, overestimated savings by $3.7 million. The Foundation based its estimates on inaccurate and incomplete Medicare and Medicaid population and claims data. In addition, the methodologies used by the Foundation did not consider several factors, such as the cost of operating the system. Although Medicare and Medicaid patient days declined after the system was implemented, other factors may have contributed to the reduction in hospital utilization in Oklahoma.

As discussed with your office, we did not obtain written comments from the Department of Health, Education, and Welfare on the matters discussed in this report. Also, as arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days from its issue date. At that time, we will send copies to interested parties and make copies available to others on request.

Sincerely yours,

Gregory J. Ahart
Director

HRD AG00022

GENERAL ACCOUNTING OFFICE REPORT TO THE HONORABLE HENRY BELLMON, UNITED STATES SENATE

SAVINGS CLAIMED FOR THE OKLAHOMA HOSPITAL UTILIZATION REVIEW SYSTEM WERE OVERSTATED

D I G E S T

The Oklahoma Utilization Review System (OURS) is a statistical screening system to assess each hospital in the State in terms of specific performance measures related to Medicare and Medicaid hospital utilization. It was designed as a substitute for the Professional Standards Review Organization system, which reviews Medicare and Medicaid patients' needs for medical care while they are hospitalized (concurrent review). (See pp. 1 and 2.)

The Oklahoma Foundation for Peer Review, which managed OURS, used two methods to prepare estimates of cost savings that resulted from the operation of OURS. One method estimates savings of $6.8 million based on a reduction in the number of days Medicare and Medicaid patients spend in the hospital. The second method estimates savings of $15.1 million based on a reduction in the number of Medicare and Medicaid claims for hospital care. (See p. 2.)

These estimates are based on many items of incorrect or incomplete data. (See ch. 2.) Also, the Foundation did not consider some other factors. For example, the Foundation's estimates do not give recognition to:

--The cost of operating OURS, which GAO computed as being $911,019. (See app. II.)

--The fact that there is not a one-to-one relationship between a hospital day saved and the reduction in per diem reimbursement because of the fixed cost of maintaining an empty bed and offsetting costs for alternate forms of care, such as nursing

home or ambulatory care. The Department of Health, Education, and Welfare (HEW) estimates that on the average only 36 percent of per diem costs are saved when a Professional Standards Review Organization eliminates a day of hospitalization. (See p. 17.)

--The probability that factors other than OURS could be contributing to changes in hospital utilization. (See p. 17.) GAO did not attempt to compute the significance of this factor because HEW has contracted to have this computation made. (See p. 4.)

To compute its estimates of savings, the Foundation compared Medicare and Medicaid hospital utilization during its first year of operation (demonstration period) to a baseline period. (See p. 2.)

To do this the Foundation had to determine the number of (1) persons in Oklahoma eligible for Medicare and Medicaid during both the baseline and demonstration periods, (2) patient claims, total dollar amount of the claims, and days of care included in the claims during the baseline period, and (3) patient claims, total dollar amount of the claims, and days of care included in the claims during the demonstration period. All of these amounts were incorrect. (See p. 7.)

The effect of these inaccuracies, calculated by applying the same assumptions and methodologies as the Foundation used, is summarized as follows.

	Savings based on reduced days of care		Savings based on reduced claims	
	Foundation	As adjusted by GAO	Foundation	As adjusted by GAO
Multiply inpatient days/claims, decrease per 1,000 Medicare and Medicaid eligibles	85.5	115.75	20.9	8.45
By number of thousands of possible Medicare and Medicaid eligibles in demonstration period	547	531.47	547	531.47
And by average charge per inpatient day/claim	$ 146	$ 183.25	$ 1,321	$ 1,490.20
Equals estimates of savings	$6,828,201	$11,273,109	$15,102,068	$6,692,371

Adjustments for other factors that the Foundation did not consider in its computations reduces the estimates as follows.

	Savings based on reduced days of care	Savings based on reduced claims (note a)
Estimates of savings based on corrected data and computed by Foundation's methodology	$11,273,109	$6,692,371
Application of HEW's average value of a hospital day saved (note b)	.36	.36
Equals	$ 4,058,319	$2,409,254
Less:		
Estimated cost of operation of OURS	911,019	911,019
Equals	$ 3,147,300	$1,498,235

a/As discussed on p. 19, we believe that estimates of cost savings should not be based on reductions in the number of claims.

b/See p. 17.

Tear Sheet

In GAO's view, even these claimed savings are questionable because other factors that may have contributed to the reductions were not taken into consideration. (See p. 17.)

The demonstration period claims data used for calculating the savings came from the same sources as the statistical data used to assess hospitals under OURS. As discussed in chapter 2, these data were often incomplete or incorrect. GAO did not assess the impact that the data inaccuracies had on actual assessments made under OURS. (See p. 13.)

Contents

ABBREVIATIONS

GAO	General Accounting Office
HCFA	Health Care Financing Administration
HEW	Department of Health, Education, and Welfare
OURS	Oklahoma Utilization Review System
PSRO	Professional Standards Review Organization

CHAPTER 1

INTRODUCTION

Senator Henry Bellmon, in an April 24, 1978, letter, requested that we review the Oklahoma Utilization Review System (OURS), which monitors Medicare and Medicaid payments to acute-care hospitals in Oklahoma. Specifically, he requested that we review (1) the savings claimed by the State through reduced Medicare/Medicaid hospital use under OURS and (2) the usefulness of OURS for carrying out Professional Standards Review Organization (PSRO) 1/ activities nationwide. (See app. I.)

The scope of our review was later reduced to:

--Validating the baseline data developed for OURS to use in preparing the estimates of savings.

--Validating subsequent data collected for OURS to compare with the baseline data.

--Commenting on any problems with the methodology used in computing the claimed savings.

The decision to reduce the scope of our review, made during a meeting with the Senator's staff, primarily resulted from the Department of Health, Education, and Welfare's (HEW's) decision to award a contract to evaluate OURS.

BACKGROUND AND DESCRIPTION OF OURS

In 1974, when HEW revised the utilization review regulations for Medicare and Medicaid, the medical community in Oklahoma claimed that, if the regulations were implemented in the State, many rural hospitals would be unable to comply because of a lack of physicians to meet the requirements for utilization review committees. In response to this problem, the State, the State Medicaid Society, and the State Hospital Association formed a task force that developed OURS as an alternative for PSRO review. Essentially, OURS is a

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1/Operating under the 1972 amendment to the Social Security Act (Public Law 92-603), PSROs determine whether services provided to patients in hospitals and long-term care facilities are (1) medically necessary, (2) provided in accordance with professional standards, and (3) provided in the appropriate setting.

statistical screening system to assess each hospital in the State in terms of specific performance measures related to utilization. OURS was funded as a demonstration project through an HEW grant to the Oklahoma Department of Institutions, Social and Rehabilitation Services (Medicaid State agency), which contracted with the Oklahoma Foundation for Peer Review (Foundation), a nonprofit organization, to implement and manage OURS.

The OURS demonstration project began on February 1, 1977, lasted 12 months, and was extended another 3 months with no additional Federal funding. The Foundation generally obtained patient claims data for the six-month period July to December 1976; the data were annualized and used as a baseline year to measure results against.

At the time of our visit, the Foundation had used two methods to compute estimates of cost savings covering its first full year as a demonstration project (Feb. 1977 through Jan. 1978). One method estimates savings based on a reduction in the number of days Medicare and Medicaid patients were hospitalized during OURS' first year compared to the baseline period. The second method estimates savings based on a reduction in the number of Medicare and Medicaid patient claims during OURS' first year compared to the baseline period. These computations showed estimated savings of $6,828,201 and $15,102,068, respectively.

The Foundation computed its estimates of savings as follows:

	Savings based on reduced days of care	Savings based on reduced claims
Multiply inpatient days/ claims, decrease per 1,000 Medicare and Medicaid eligibles	85.5	20.9
By number of thousands of Medicare and Medicaid eligibles in demonstration periods	547	547
And by average charge per inpatient day/ claim	$ 146	$ 1,321
Equals estimates of savings	$6,828,201	$15,102,068

How OURS works

Essentially, OURS was designed to substitute a system of retrospective claims review for the PSRO system of concurrent review of patient care. Quarterly, individual hospital data are compared to established standards of performance. These standards are in the following general areas: frequency of claims denied (where the Medicare fiscal intermediary would have determined that the service was not medically necessary); amount of claims totally denied; utilization of pharmacy, laboratory, radiology, and ancillary services; frequency of excessive preoperative length of stay; total days of excessive preoperative length of stay; frequency of claims partially denied; amount of claims partially denied; and average length of stay. The results are then supplied to a regional review team, consisting of nine doctors, to determine the hospital's status for the succeeding quarter. Hospitals are placed into one of three categories--waivered, conditionally waivered, or nonwaivered.

Hospitals whose overall performance falls within the established standards are granted waivered status. In this status, it is assumed that the admission of all Medicare and Medicaid patients is medically necessary. These hospitals are exempt from concurrent review except for patients whose hospital stays are being extended. Waivered status continues as long as the hospital continues to meet these standards.

Hospitals are placed in conditionally waivered status if any of their performance measures does not meet established standards of performance and the regional review team finds the variation unjustifiable. A hospital placed in conditionally waivered status may be required to assign a shorter length of stay on all admissions than if it were in a waivered status. Also, a hospital in this status may be required to document the presence of a condition that justifies the patient's admission.

Nonwaivered hospitals are those whose overall performance is judged to be unacceptable. In this status, the hospital must make a case-by-case review to determine if admissions are medically necessary. A nonwaivered hospital is monitored monthly by the Foundation. One quarter of acceptable performance is required before such a hospital can be placed in either of the other two status categories.

The patient's length of stay for waivered, conditionally waivered, and nonwaivered is assigned within 72 hours of admission by the hospital's review coordinator. Review

coordinators are usually nurses employed by the hospital to perform, among other tasks, the administrative and monitoring functions associated with OURS. In addition, each hospital has a physician adviser who aids the review coordinator and intercedes in situations where the review coordinator believes that a staff physician may be unnecessarily hospitalizing or prolonging the stay of a patient. In addition to assigning initial lengths of stay, review coordinators conduct continued stay reviews at specified intervals.

HEW EVALUATING OURS

On September 29, 1979, HEW awarded a contract to evaluate OURS. The evaluation is to assess hospital admissions and stays on a pre- and a post-OURS basis. The evaluation will cover three periods of time--baseline, demonstration project, and operation as a conditional PSRO. The evaluation is to focus on the extent to which OURS has affected utilization of hospital services, program expenditures, and administrative costs.

The contractor is required to determine the impact of OURS on utilization and cost of Medicare and Medicaid services in Oklahoma using the following measures in the analysis of utilization:

--Total days of hospital care.

--Total days of hospital care per 1,000 eligibles.

--Total admissions.

--Average length of stay.

--Total number of readmissions.

SCOPE OF REVIEW

We made our review primarily at the Foundation's office in Oklahoma City, Oklahoma. We also reviewed Medicare claims data at the fiscal intermediaries' offices (Blue Cross-Blue Shield of Oklahoma, Tulsa, Oklahoma; and Mutual of Omaha, Omaha, Nebraska). We reviewed Medicaid claims data and population statistics relating to Medicaid eligibles at the Medicaid State agency in Oklahoma City. We obtained population statistics relating to eligible Medicare enrollees in Oklahoma from the Health Care Financing Administration (HCFA), Baltimore, Maryland.

We visited the Health Systems Agency responsible for the health systems plan for Oklahoma and six hospitals in the State to discuss OURS. We spoke with Foundation officials, representatives of HEW headquarters and HEW's Dallas regional office responsible for monitoring and evaluating the Foundation's performance, and officials at the other locations visited.

CHAPTER 2

PROBLEMS WITH DATA USED BY THE FOUNDATION TO COMPUTE ITS ESTIMATE OF SAVINGS

The Foundation's estimates were based on many items of incorrect or incomplete data that had the effect of overstating and understating the estimated savings. We obtained corrected and complete data and recalculated the estimates by applying the same assumptions and methodologies as the Foundation. Our recomputations are summarized in the following table.

	Savings based on reduced days of care		Savings based on reduced claims	
	Foundation	As adjusted by GAO	Foundation	As adjusted by GAO
Multiply inpatient days/claims, decrease per 1,000 Medicare and Medicaid eligibles	85.5	115.75	20.9	8.45
By number of thousands of possible Medicare and Medicaid eligibles in demonstration period	547	531.47	547	531.47
And by average charge per inpatient day/claim	$146	$183.25	$1,321	$1,490.20
Equals estimates of savings	$6,828,201	$11,273,109	$15,102,068	$6,692,371

In chapter 3, we further adjust and recompute the savings to show the effect of some of the methodological problems we noted. These adjustments reduced the estimate of savings to $3.1 million and $1.5 million based on reductions in patient days of care and patient claims, respectively. The remainder of this chapter, however, deals solely with the cause for and the effect of the inaccurate data used by the Foundation.

DATA DEFICIENCIES

To make its computations of estimated savings, the Foundation determined the number of (1) persons in Oklahoma eligible for Medicare and Medicaid during both the baseline and demonstration periods, (2) patient claims, total dollar amount of the claims, and days of care included in the claims during the baseline period, and (3) patient claims, total dollar amount of the claims, and days of care included in the claims during the demonstration period. There were inaccuracies in all of these numbers.

Eligibility statistics

Our comparison of the statistics used by the Foundation with those given to us by HCFA and the State showed that the Foundation's baseline statistics for persons eligible for Medicare and Medicaid in Oklahoma were understated by 293 eligibles, and its demonstration period statistics were overstated by 15,483 eligibles. This is summarized in the following table.

	Baseline period			Demonstration period		
	Eligibility statistics used by the Foundation	Statistics provided to GAO	Over (under)	Eligibility statistics used by the Foundation	Statistics provided to GAO	Over (under)
Medicare	330,218	330,218	0	351,503	337,613	13,890
Medicare disabled	34,417	34,417	0	40,422	37,423	2,999
Medicare renal disease	563	0	563	591	0	591
Medicaid	163,155	164,011	(856)	154,433	156,430	(1,997)
Total	528,353	528,646	(293)	546,949	531,466	15,483

Our statistics and the Foundation's statistics on the number of eligibles were obtained from HCFA for Medicare eligibles and from the State agency for Medicaid. The Foundation's statistics, however, included some projections that underestimated the number of eligibles in the baseline period and overestimated the number of eligibles in the demonstration period. This resulted in overstating the number of patient days and claims per thousand eligibles in the baseline period and understating the number of patient days and claims per thousand eligibles in the operational period.

To demonstrate the significance of the incorrect eligibility data, we recalculated the estimates of savings by using (1) the same methods as the Foundation (2) the Foundation's data for claims, patient days of hospitalization, and claims charges as shown on pages 9 and 10, and (3) corrected eligibility data. Our recomputations show that the savings based on reduced days of care would be $274,000 instead of $6.8 million and the savings based on reduced claims would be $8.2 million instead of $15.1 million.

Baseline period claims data

The Foundation did not obtain a full year of claims data to be used as a baseline. Instead, the Foundation obtained 6 months of data from Blue Cross and the State Medicaid agency and 3 months of data from Mutual of Omaha, and then projected these data to an annual figure. Because this approach did not recognize seasonal fluctuations in hospital utilization, it did not result in an accurate baseline. We eliminated this problem by using data for the full year preceding the demonstration period--February 1, 1976, to January 31, 1977--for comparison purposes.

Our comparison of the OURS baseline claims data to the payment history records showed that (1) the number of baseline claims used by the Foundation was understated by 13,696 claims, (2) the number of baseline inpatient days was understated by 37,235 days, and (3) the amount of claims charges was understated by $54.7 million.

Comparison of the Foundation's Baseline Data with Payment History Records Data

Paying agency	Payment history records data	Foundation data	Over (under)
Claims:			
Blue Cross	132,851	132,446	(405)
Mutual of Omaha	8,382	9,940	1,558
Medicaid agency	51,933	37,084	(14,849)
Total	193,166	179,470	(13,696)
Inpatient days:			
Blue Cross	1,183,788	1,175,652	(8,136)
Mutual of Omaha	79,541	103,456	23,915
Medicaid agency	332,334	279,320	(53,014)
Total	1,595,663	1,558,428	(37,235)
Claims charges:			
Blue Cross	$182,162,824	$146,161,512	($36,001,312)
Mutual of Omaha	15,175,122	18,160,092	2,984,970
Medicaid agency	50,475,818	28,821,598	(21,654,220)
Total	$247,813,764	$193,143,202	($54,670,562)

Demonstration period claims data

Our comparison of the OURS demonstration period data to the payment history records showed that (1) the number of demonstration claims was understated by a net of 15,503 claims, (2) the number of demonstration inpatient days was overstated by 22,198 days, and (3) the claims charges were understated by $52.8 million.

Comparison of the Foundation's Demonstration Period Data with Payment History Records Data

Paying agency	Payment history records data	Foundation data	Over (under)
Claims:			
Blue Cross	126,384	133,138	6,754
Mutual of Omaha	12,788	8,409	(4,379)
Medicaid agency	50,532	32,654	(17,878)
Total	189,704	174,201	(15,503)
Inpatient days:			
Blue Cross	1,103,730	1,218,898	115,168
Mutual of Omaha	120,199	82,586	(37,613)
Medicaid agency	318,731	263,374	(55,357)
Total	1,542,660	1,564,858	22,198
Claims charges:			
Blue Cross	$199,775,033	$181,738,568	($18,036,465)
Mutual of Omaha	26,466,559	16,902,875	(9,563,684)
Medicaid agency	56,454,682	31,224,182	(25,230,500)
Total	$282,696,274	$229,865,625	($52,830,649)

CAUSES FOR FAULTY CLAIMS DATA

As previously discussed, the inaccuracies in the baseline claims data were primarily caused by the use of projections that did not take into account seasonal fluctuations in hospital use.

In our opinion, the inaccuracies in the demonstration period claims data were primarily caused by the lack of controls to ensure that Blue Cross, Mutual of Omaha, and the State agency reported all claims data to the Foundation. Operating data were provided to the Foundation by Blue Cross in accordance with a contract which provided that:

"* * * The necessary computer functions to carry out the purpose of the OURS Plan shall be conducted by Blue Cross utilizing data made available to it by the Oklahoma Department of Institutions, Social and Rehabilitative Services, Mutual of Omaha as a Medicare Part A fiscal intermediary for eight hospitals; and from Blue Cross as a Medicare Part A fiscal intermediary for the balance of Oklahoma hospitals * * *."

The contract did not contain any provisions to ensure that the data used in "the necessary computer functions" represented all of the claims paid.

Blue Cross data processing personnel told us that complete documentation of changes to the OURS computer program was not maintained. Because of the lack of documentation, we could not reconstruct the OURS statistics to determine the exact reasons for the differences between the OURS statistics and the payment history records data.

However, based on our review of available records and discussions with officials and personnel at the Foundation, Blue Cross, and the State agency, the reasons appear to include: exclusion of claims data, exclusion of claims charges, and computer programing errors. In addition, the Foundation was inconsistent in its inclusion or exclusion of psychiatric hospital claims. The Foundation also made a $996,000 arithmetic error in determining total hospital charges for reported claims during the demonstration period.

Exclusion of claims data

According to a Blue Cross data processing employee, all Medicare and Medicaid claims submitted through Blue Cross, Mutual of Omaha, and the State agency are screened by Blue Cross and excluded from the OURS operating reports if the patient's primary diagnosis code is missing or if certain data reflect impossible situations (e.g., the surgery date being earlier than the admission date).

In addition, a State agency official told us that the agency did not exclude any claims from the baseline data. However, the agency excluded claims from the data provided Blue Cross for inclusion in the demonstration period if information needed for the OURS operating reports was erroneous or missing or if information necessary for proper computer processing, such as Blue Cross hospital codes, was not up to date or available.

Our discussions with Blue Cross and State agency officials indicated that certain charges were excluded from OURS data.

--Blue Cross did not report partial hospital claims (interim bills) to the Foundation because Blue Cross understood that the Foundation wanted the OURS reports to reflect one claim for each hospital stay in order to be consistent with the Medicaid program. We could not reconstruct the effect of this omission on the demonstration period data; however, in a reconciliation of payment records to OURS data for September 1978, Blue Cross determined that $1.3 million in charges on 357 interim bills had been excluded from OURS for that month alone.

--Blue Cross accumulates Medicare charge information for the OURS reports by hospital cost centers, such as X-ray, operating room, and laboratory. The State Medicaid agency uses different cost centers--three of which do not fit within the definitions used for the Medicare centers. As a result, Medicaid charges for these three centers were not included in the OURS reports.

Computer programing errors

Our discussion with Blue Cross officials indicated that computer programing errors caused an overstatement in the number of claims and inpatient days because the Blue Cross computer program:

--Allowed some HCFA adjustments to Medicare claim payments to be improperly included in the OURS data submitted to the Foundation. This was discovered in November 1978, when Blue Cross reconciled its OURS data to its claims payment records for us. As an example of the significance of this error, in a reconciliation of payment records to OURS data, Blue Cross determined that the OURS data for September 1978 included 310 adjustments.

--Added 1 additional inpatient day to each claim for hospital stays in which the patient was admitted and discharged in different calendar years. Blue Cross data processing personnel could not explain why this happened. We noted that the computer program was

originally written in 1976, a leap year. The additional day was probably added to account for the 366th day in 1976. However, the computer program was not revised after 1976 to delete the extra day.

Inconsistent use of data on psychiatric hospitals

Even though it is not responsible for reviewing services in psychiatric hospitals, the Foundation did obtain claims data applicable to them. Since OURS does not pertain to these institutions, the data should not have been used in the savings calculations. However, although the psychiatric data were deleted from the baseline statistics, they were inappropriately included in the demonstration period statistics.

In addition, 5,707 acute-care hospital claims for the baseline period were not included by the Foundation because the claims were erroneously reported with the psychiatric hospital claims data. Also, the Foundation included some claims data in the demonstration statistics that had not been definitely identified as being either acute-care or psychiatric claims data.

INACCURATE DATA COULD AFFECT EFFECTIVENESS OF OURS OPERATIONS

As previously discussed, OURS is a statistical screening system to assess each hospital in the State in terms of specific performance measures related to utilization. The demonstration period claims data used for calculating the savings came from the same sources as the statistical data used to assess hospitals under OURS. As previously discussed, these data were often incomplete or incorrect.

We did not determine the impact that the inaccuracies we identified had on actual assessments made under OURS because (1) it was outside the scope of our review and (2) any such judgments on our part would have been highly speculative. We believe, however, it is imperative that any system that relies on a statistical audit to assess hospital performance use the most accurate statistical data possible.

CONCLUSIONS

The Foundation computed its estimated savings using incomplete and inaccurate eligibility and claims data.

Because the Foundation did not ensure that the Medicare fiscal intermediaries and the State Agency for Medicaid reported all claims data to OURS, inaccuracies and incompleteness in the baseline and demonstration period claims data occurred. Also, the Foundation's annualization of less than a year's claims data for use as a baseline did not recognize seasonal variations in hospital utilization.

Upon making our own calculations, using complete and corrected data and the same methodologies used by the Foundation, we found that there were reductions in hospital utilization from the OURS baseline to the demonstration period. The corrected data showed that 8.45 fewer hospital claims per 1,000 eligibles were paid and 115.75 fewer inpatient days per 1,000 eligibles were utilized in Oklahoma from the baseline to the demonstration period. In contrast, the data used by the Foundation showed that 20.9 fewer hospital claims per 1,000 eligibles were paid and 85.5 fewer inpatient days per 1,000 eligibles were utilized.

HEW has apparently not made a decision on the usefulness of OURS for carrying out PSRO activities in Oklahoma; it is in the process of evaluating the impact of OURS. In view of the substantial differences we found between the Medicare and Medicaid payment records and the data obtained by OURS, we question whether the Foundation has demonstrated that it can conduct a valid retrospective statistical audit of hospital performance using Medicare and Medicaid claims data. We believe that, if OURS is to be retained by HEW as the means for conducting PSRO activities in Oklahoma, the Foundation's first priority should be to demonstrate that it can obtain accurate and complete information on claims and hospital utilization.

CHAPTER 3

GAO RECOMPUTATION OF SAVINGS GIVING RECOGNITION TO HCFA EVALUATION APPROACH

The Foundation's use of average charges per hospital day to estimate the dollar amount of the savings attributable to OURS resulted in overstated savings because, under Medicare and Medicaid, hospitals are reimbursed on the basis of reasonable costs. Average or reimbursed costs do not give recognition to:

--The fact that there is not a one-to-one relationship between a hospital day saved and reduction in per diem reimbursement because of the fixed cost of maintaining an empty hospital bed.

--Any offsetting costs the programs may have incurred for such alternate forms of care as nursing home or ambulatory care.

A January 1979 evaluation of the PSRO program by HCFA 1/ recognizes these complex factors, and for illustrative purposes, we have adjusted the corrected estimate of savings to give effect to HCFA's more sophisticated evaluation methodology for placing a dollar value on a hospital day saved. In addition, the Foundation did not consider the costs of operating OURS that we believe should be taken into account in computing savings. Finally, the Foundation's estimates do not consider the fact that something other than OURS could be causing changes in hospital utilization.

1/HEW Pub. No. HCFA-03000, Jan. 1979.

Our recomputation of the savings using the corrected data is summarized in the following table.

	Savings based on reduced days of care	Savings based on reduced claims (note a)
Inpatient days/claims decrease per 1,000 eligibles	115.75	8.45
Multiplied by the number of thousands of Medicare and Medicaid eligibles in demonstration period	531.47	531.47
And by average charge per inpatient day/ claim	$ 183.25	$1,490.20
Equals	$11,273,109	$6,692,371
Application of HCFA's average value of a hospital day saved	X .36	X .36
Equals	$4,058,319	$2,409,254
Less: Estimated cost of operation of OURS during demonstration project (note b)	911,019	911,019
Equals (note c)	$3,147,300	$1,498,235

a/As discussed on page 19, we do not believe that estimates of cost savings should be based on reductions in the number of claims.

b/See appendix II.

c/In our view, these amounts are questionable because, as discussed in this chapter, certain factors have not been considered.

The Foundation's computations and our recomputations do not, however, address reductions in utilization that may have been caused by factors other than OURS. Also, we believe that changes in the number of claims is not a sound basis of estimating savings because it does not take into account changes in average patient length of stay.

HCFA ESTIMATE OF THE VALUE OF A HOSPITAL DAY SAVED

Measuring PSRO or other utilization review savings in dollar terms as a result of reductions in hospital utilization is a complex undertaking. In fact, HCFA has advised us that PSROs are being told that estimates of dollar savings should not be attempted since it does not believe that they are capable of developing accurate estimates of the cost of a hospital day saved.

HCFA's January 1979 evaluation of the PSRO program included computations of the value of a hospital day saved which gave recognition to (1) the relationship between changes in Medicare hospital utilization and in Medicare reimbursements and (2) the substitution of nursing home and ambulatory care for inpatient hospital care. This was computed for each of 96 PSRO areas studied, and in terms of a percentage of average per diem, reimbursement ranged from 20 to 57 percent. The average was 36 percent, and since Oklahoma was not included in the study, we elected to use this value for illustrative purposes.

OTHER FACTORS MAY HAVE CAUSED THE DECREASES

The Foundation did not take into account the fact that something other than OURS could have caused the changes in hospital utilization. For example, increases or decreases in the availability of home health care and nursing home beds can affect patients' need to remain hospitalized.

Changes in hospital utilization may also be the result of other organizations' patient review activities. For example, we noted that, before OURS became a conditional PSRO in March 1978 and during the first 6 months that it operated as such, Blue Cross, as a fiscal intermediary in Oklahoma, reviewed Medicare claims with the view toward assuring that patients were at the proper level of care and that their care was medically necessary. Thus, Blue Cross was also reviewing claims during the entire demonstration period used in the

estimate. On October 1, 1978, Blue Cross stopped reviewing 100 percent of the Medicare claims; it currently reviews a 20-percent sample of the claims.

The executive director of the Oklahoma Health Systems Agency believes that these intermediary reviews were a factor in the trend toward shorter lengths of stay that occurred from 1970 to 1975.

The executive director told us that it would be difficult to isolate the effect of OURS on reducing hospital utilization, but just knowing that a review would take place would have an effect on doctors.

We visited six hospitals and discussed whether changes in hospital utilization resulted from OURS or other factors. Four hospitals showed a decrease and two showed an increase in Medicare/Medicaid utilization from the baseline period to the OURS demonstration period.

Officials at the two hospitals where utilization increased stated that OURS had generated an increased awareness of utilization review. An official at one of the hospitals stated that the increased awareness had resulted in better physician documentation of patients' medical records. At both hospitals we were told that the increased utilization was caused by the addition of physician specialists to their staffs.

Officials at three of the four hospitals where data indicated reduced inpatient claims stated that OURS should receive some credit for the reduction. An official at the other hospital indicated that OURS did not affect utilization.

Although data provided to us showed a slight decrease in utilization at one hospital, hospital records actually showed a slight increase. A hospital official attributed the increase to an increased patient load caused by opening a new doctor's building nearby. At two of the hospitals we were told that a reduced patient load resulted either from a reduced number of doctors on their staffs or from competition from other hospitals in the vicinity.

An official at the fourth hospital attributed the decrease to problems in converting from computer services for billing claims to an in-house computer. He said the hospital was actually 6 months behind in the billing. Thus, the unbilled claims had not been submitted to the fiscal intermediaries or the State Medicaid agencies and would not be included in the OURS data.

We did not attempt to measure the impact that these or other factors had on hospital utilization in Oklahoma because the contract that HEW has awarded for evaluating OURS requires that the contractor develop utilization data for a comparison group. Utilization changes in Oklahoma will then be compared to the changes in the comparison group in order to measure the impact of OURS.

CHANGES IN NUMBER OF CLAIMS NOT A GOOD INDICATOR OF COST SAVINGS

Computing savings based on changes in the number of claims (each patient equals one claim) per thousand eligibles without considering changes in the average amount of the claims is a poor measure of changes in utilization because two factors can skew the results:

--The review system may affect average patient length of stay, thus reducing utilization without reducing the number of claims.

--The claims being eliminated by the review system may not be the average claims, but could be claims for short-stay patients.

If OURS were to reduce the average patient stay from 10 to 5 days without affecting the number of patients, a computation of estimated savings based only on changes in the number of claims would not indicate any savings. Also, if the average patient stay was 10 days and OURS eliminated five claims each amounting to only 1 day, a computation of estimated savings based on changes in the number of claims would show savings based on 50 days of hospital care instead of just 5. Because of these factors, we do not believe that estimates of cost savings should be computed based on reductions in the number of claims.

CONCLUSIONS

The methodology used by the Foundation in computing its savings was deficient. The Foundation did not consider (1) its cost of operation, (2) the fixed cost of maintaining an empty hospital bed, or (3) any offsetting charges the Government may have incurred for alternate forms of care, such as skilled nursing care. In addition, the Foundation did not consider other factors that may have affected changes in utilization.

Our computations--which considered the Foundation operating costs and a factor for fixed hospital costs even if hospital beds are empty and for offsetting costs that the Government incurs for alternate forms of care--resulted in computed savings of (1) about $3.1 million for the decrease in inpatient days compared to $6.8 computed by the Foundation and (2) $1.5 million for the decrease in inpatient claims compared to $15.1 computed by the Foundation. Therefore, the Foundation's estimates were overstated by $3.7 million using the inpatient days method and $13.6 million using the inpatient claims method. Also, factors other than OURS may have contributed to the decline in hospital utilization.

APPENDIX I

HENRY BELLMON
OKLAHOMA

COMMITTEES:
BUDGET
APPROPRIATIONS
AGRICULTURE, NUTRITION, AND FORESTRY

United States Senate
WASHINGTON, D.C. 20510

April 24, 1978

The Honorable Elmer B. Staats
Comptroller General
of the United States
General Accounting Office
Washington, D. C. 20548

Dear Mr. Staats:

Oklahoma has pioneered a new approach to medical reviews. I am greatly impressed with the results being claimed and the potential for national savings in health care costs. This letter is to request that the General Accounting Office review the Oklahoma Utilization Review System either in conjunction with, or in a manner similar to, current reviews being performed at the request of the Oversight Committee of the House Ways and Means Committee. I am especially interested in a review of the claimed savings of the Oklahoma Plan and of the usefulness of the Oklahoma Model for carrying out P.S.R.O. activities nationwide.

Thank you for your attention to this matter and please let me know if I can be of assistance.

Contact with O.U.R.S. may be made by getting in touch with Mr. Ed Kelsay, Executive Director, Foundation for Peer Review, 601 Northwest Expressway, Oklahoma City, Oklahoma 73118 (phone 405/ 843-9571).

Sincerely,

Henry Bellmon

Henry Bellmon

HB:csb

APPENDIX II

OURS OPERATING COSTS

The Foundation did not consider the cost of operating the OURS demonstration project in its computation of savings from reduced utilization.

On February 1, 1977, the Oklahoma State Medicaid agency received a demonstration grant from HEW to conduct OURS. The State agency had entered into a contract with the Foundation on January 23, 1977, to conduct OURS. The contract provided that the project should last for 14 consecutive months to begin on December 1, 1976. According to the contract, the Foundation was to use the first 2 months to plan for the 12-month operational phase. The operational phase or demonstration period began on February 1, 1977, and was to extend through January 31, 1978. HEW extended the project at no increase in funding from January 31 to April 30, 1978, to prevent a gap between the end of OURS and the beginning of the Foundation's PSRO operation in the State. The State Medicaid agency contract with the Foundation provided that the total cost of the contract would not exceed $193,430.

The Foundation's report of expenditures for OURS showed that, from January 1, 1977, to March 31, 1978, $143,279 had been spent and that, during the next 5 months, an additional $15,322 was spent, bringing the total OURS expenditures to $158,601. The State Medicaid agency provided $164,823 to the Foundation, leaving a cash balance of $6,222 which was to be used for a financial audit of OURS, used for additional OURS reports, or returned. The $158,601 of expenditures did not include:

--Hospital utilization review costs, specifically review coordinator costs. As discussed in chapter 1, each hospital had a review coordinator during the OURS demonstration project. The hospital was reimbursed for utilization review, including review coordinator costs, through its Medicare fiscal intermediary. During the OURS demonstration project, the Foundation was not involved in approving utilization review costs. However, as a conditional PSRO, the Foundation was required to approve hospitals' budgets for utilization review. Under its PSRO operation, the Foundation estimates that review coordinator costs will amount to about $660,000 annually.

--About $60,000 in costs incurred by Blue Cross but not paid by the Foundation related to data processing services provided for OURS.

--Blue Cross medical review costs for 100-percent screening of Medicare claims under OURS, which Blue Cross estimated would cost $36,000 under the PSRO operation.

Considering these matters, we estimate that the OURS demonstration project cost over $900,000, as shown in the following table. These estimated costs generally cover January 1, 1977, through January 31, 1978, a 13-month period that includes 1 month of planning time.

Estimated Cost of Operating OURS

Foundation	a/$124,175
State Medicaid agency	b/29,664
Blue Cross:	
Data processing	c/59,910
Medical review	d/36,000
Hospital utilization review costs	e/661,270
Total	$911,019

a/$143,279 (expenditures to 3/38) x 13 months 1/77 - 1/78)
15 months (1/78 thru 3/78)

b/State Medicaid agency
OURS costs thru 10/78 $215,023

Less: OURS contract costs 164,823
State costs not reimbursed by the State Medicaid agency contract $ 50,200

$50,200 x 13 months (1/77 - 1/78)
22 months (1/77 thru 10/78)

c/Actual cost per Blue Cross through January 1978.

d/Based on Blue Cross estimate to continue under PSRO program.

e/Foundation estimate based on PSRO budgeted costs.

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