REPORT BY THE

Comptroller General

OF THE UNITED STATES

Problems With Evaluating The Cost Effectiveness Of Professional Standards Review Organizations

Professional Standards Review Organizations are designed to assure that health care services provided under Medicare and Medicaid are delivered as effectively, efficiently, and economically as possible.

GAO reviewed nine estimates of cost savings for Professional Standards Review Organizations totaling $21.4 million plus 67,000 patient days of care and found that they were overstated by $16.7 million and 33,900 patient days of care, primarily because of deficiencies in the data used. In addition, deficiencies in the methods used make the remaining savings highly questionable.

Data the Department of Health, Education, and Welfare used in its 1977 and 1978 evaluations of Professional Standards Review Organizations included information on hospitals that should not have been included and omitted information that should have been included. GAO reviewed 5 of the 18 Professional Standards Review Organizations included in the 1977 evaluation and was told by officials at these organizations and at hospitals under their review that a variety of factors caused changes in hospital use.

HRD-79-52
JULY 19, 1979

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-164031(3)

The Honorable Sam M. Gibbons
Chairman, Subcommittee on Oversight
Committee on Ways and Means
House of Representatives HSED4102

Dear Mr. Chairman:

Your December 2, 1977, letter requested that we review the validity of the claims being made by individual Professional Standards Review Organizations with respect to cost savings. In addition, you requested that we attempt to determine the causes for any significant increases or decreases in utilization rates observed at the Professional Standards Review Organizations included in a 1977 evaluation of the program by the Department of Health, Education, and Welfare.

This report discusses how incomplete data and improper methodologies resulted in invalid cost saving estimates. Also, it discusses problems with the data used in the Department's 1977 evaluation. Some of these problems still exist in the Department's 1978 evaluation of the Professional Standards Review Organization program which was released in January 1979.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days from the date of the report. At that time we will send copies to interested parties and make copies available to others on request.

Sincerely yours,

Elmer B. Staats

Comptroller General
of the United States

COMPTROLLER GENERAL'S REPORT
TO THE SUBCOMMITTEE ON OVERSIGHT
HOUSE COMMITTEE
ON WAYS AND MEANS

PROBLEMS WITH EVALUATING THE COST EFFECTIVENESS OF PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS

D I G E S T

Nine estimates of cost savings attributable to Professional Standards Review Organizations are overstated by $16.7 million for Medicare and Medicaid.

The Department of Health, Education, and Welfare's (HEW's) 1977 and 1978 evaluations of the program are not based on appropriate hospital statistics.

Professional Standards Review Organizations, established by 1972 amendments to the Social Security Act, are designed to make sure that health care services provided under Medicaid and Medicare are delivered as effectively, efficiently, and economically as possible. This is accomplished, in part, by reviewing the care provided to hospital patients. (See p. 1.)

All but one of the nine estimates were either prepared by a Professional Standards Review Organization or prepared based on information provided by the Organization. The estimates indicated savings of over $21.4 million plus 67,000 patient days of care. (See ch. 2.)

GAO also attempted to identify the causes for significant increases or decreases in Medicare hospital use in 5 of 18 Professional Standards Review Organization areas included in HEW's 1977 evaluation of the program. (See ch. 3.)

ESTIMATES OF COST SAVINGS

It is important that estimates of cost savings be accurate. GAO noted several significant deficiencies in the data used to compute the nine estimates of cost

savings. Data for eight of the nine were incomplete and/or included, as savings, days of care that were paid by Medicaid or Medicare. GAO applied the same methods that were used in the nine estimates (except in one case) to data that have been corrected to make them as current, complete, and accurate as possible. This resulted in total net savings of only about $4.7 million and 33,126 days of care. (See p. 7.)

Various methods were used to compute these savings. GAO noted deficiencies with all but one of the methods. These deficiencies make the remaining savings highly questionable. (See p. 12.)

CHANGES IN MEDICARE USE

To compute changes in Medicare hospital use, HEW obtained data for the Professional Standards Review Organization areas and their comparison areas--areas with no active Organization--from the Social Security Administration. Several problems were noted with these data. Statistics included information on 20 hospitals that should not have been included in the evaluation and omitted information on three hospitals that should have been included. For one area, this problem resulted in a significant error in the change in Medicare hospital use. A reported decline of 10.7 percent in this area in relation to its comparison area was actually less than 1 percent when the data were corrected. (See p. 19.)

Professional Standards Review Organization and hospital officials said that increases and decreases in Medicare hospital use were attributable to many factors, such as changes in

--medical services,

--medical practice,

--number and availability of physicians,

--availability of home health care,

--availability of nursing home beds, and

--changes in Medicare population.

In addition, the work of Professional Standards Review Organizations was cited as a factor in reducing hospital use in two areas--the only ones where, based on corrected data, hospital use declined significantly. (See p. 23.)

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GAO's findings should not be construed to mean that the Professional Standards Review Organization approach to cost control is not working. The findings only apply to those studies GAO reviewed--and with respect to these only show the uncertain amounts of the claimed savings without drawing any conclusions on cost savings.

RECOMMENDATIONS

AGC00012

The Secretary, HEW, should require an extensive validation of its data. This should include onsite validation (by individuals knowledgeable of local area conditions) of the appropriateness of the hospitals and the reasonableness of the data to assure that the data are complete and accurate before they are used to evaluate the effectiveness of Professional Standards Review Organizations. (See p. 29.)

In addition, to assist Organizations that plan to make estimates of savings, the Secretary should also direct the Administrator, Health Care Financing Administration, to

AGC00624

--provide technical assistance in preparing assessments of cost savings and

--develop standard methods that Organizations can use to measure their effectiveness in reducing hospital utilization. (See p. 17.)

HEW COMMENTS

HEW said that most of the concerns GAO raised on the validity of the data used in HEW's 1977 evaluation have been corrected. However, GAO found that all 23 hospitals incorrectly reported in the 1977 evaluation were similarly included or not included in HEW's 1978 evaluation. (See p. 28.)

HEW officials said that the types of savings estimates GAO discussed should not be attempted by individual Organizations because estimates relating to utilization reductions can be done best on a national scale and these Organizations do not have the capability to develop accurate estimates of the cost of a hospital day saved. (See p. 17.)

GAO's recommendations for providing technical assistance were aimed at those Organizations that planned to make and publicize estimates of savings; therefore, to the extent that HEW succeeds in discouraging such activity, GAO's recommendations would not apply. Conversely, if for public relations or other purposes Professional Standards Review Organizations want to provide information on program accomplishments to the public and to the Congress, then GAO believes HEW has an obligation to see that the information released is reasonably accurate and current. (See p. 17.)

Contents

ABBREVIATIONS

ALOS	average length-of-stay
GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare
HCFA	Health Care Financing Administration
OPEL	Office of Planning, Evaluation, and Legislation
PSRO	Professional Standards Review Organization
SSA	Social Security Administration

CHAPTER 1

INTRODUCTION

On October 30, 1972, the Social Security Amendments of 1972 (Public Law 92-603) were enacted. Section 249F of this act provided that the Secretary, Department of Health, Education, and Welfare (HEW), establish independent Professional Standards Review Organizations (PSROs) throughout the country. PSROs have responsibility for the comprehensive, ongoing review of services provided under the Medicare, Medicaid, and Maternal and Child Health Programs.

Medicare provides health insurance benefits to the aged, disabled, and certain others. During fiscal year 1978, this program cost about $25.2 billion. Medicaid--a Federal/State program--provides medical services for persons whose income and resources are insufficient to meet the cost of necessary medical services. During fiscal year 1978, this program cost about $18.9 billion, of which the States' share amounted about $8.3 billion. Federal grants to States are provided under the Maternal and Child Health Program to enable the States to expand and improve services to reduce infant mortality and otherwise promote the health of mothers and children, especially in rural and poverty areas. During fiscal year 1978, this program cost about $400 million.

The Senate Committee on Finance recommended establishing the PSRO program as a partial solution to the dual problem of rising health care costs and the high incidence of medically inappropriate services rendered to Medicare and Medicaid patients. The Committee noted that the economic impact of the overutilization of services was significant. It also expressed concern over the effect that such overutilization had in terms of the health of the aged and the poor.

The Committee considered inadequate utilization controls that existed in the two programs. It cited certain deficiencies, including lack of program coordination; lack of professional participation in, and support of, review activities; restriction of required review to institutional care; and merely token reviews. The act provided that PSROs were to determine whether services provided to patients in hospitals and long-term care facilities were (1) medically necessary, (2) provided in accordance with professional standards, and (3) provided in the appropriate setting. PSROs are currently required to review services provided in hospitals and nursing

homes. In addition, October 1977 amendments to the Social Security Act (Public Law 95-142) require PSROs to review noninstitutional (ambulatory) care.

To meet their responsibilities, PSROs review admissions, certify the need for continuing treatment, review extended or costly treatment, make medical care evaluation studies, and review profiles of the medical care provided. The review of admissions and continuing treatment is performed as these services are provided and is called concurrent review. PSRO review systems are being implemented first in hospitals, since Federal expenditures are greatest in this category of service. As of January 29, 1979, there were 195 PSRO areas, and PSRO concurrent review was being performed in 181 of those areas. PSRO program funding has grown from $4.5 million in 1973 to $147 million for fiscal year 1978.

EVALUATIONS OF PSRO PROGRAM

It is important that evaluations attempting to assess the cost effectiveness of PSROs be based on accurate data. Variations in utilization of less than 2 percent can make the difference of whether or not a PSRO is considered cost-effective.

During June 1978 hearings, the Chairman, Subcommittee on Oversight, House Committee on Ways and Means, stated that the PSRO program was created by the Congress in 1972 with the intent that PSROs could be a mechanism for containing health care costs and, to some extent, could improve the quality of care. He added that it is incumbent on the PSROs and HEW to demonstrate the program's value.

During the fiscal year ended September 30, 1977, the PSRO program was evaluated by the Office of Planning, Evaluation, and Legislation (OPEL) of the Health Services Administration, U.S. Public Health Service, HEW. Part of this evaluation was an analysis of Medicare data to determine the effects of the PSRO program on hospital days of care per 1,000 enrollees, hospital admissions per 1,000 enrollees, and the average length of stay per Medicare patient.

Eighteen PSRO areas were the basis for this analysis. In these areas, sufficient experience existed to permit an assessment of the impact of PSRO concurrent review on Medicare utilization rates. Medicare utilization rate data for these 18 PSROs were compared with data from 26 nonactive PSRO areas. These 26 areas were matched to the 18 active areas on 15 selected demographic and health systems characteristics.

The data were analyzed in relation to nonactive PSRO areas in order to eliminate changes that affected the utilization rates, but which were not the result of PSRO review.

According to the study, in aggregate, no statistically significant overall PSRO effect was found on days of care per 1,000 enrollees. This finding implies that, taken as a whole, the PSRO program thus far has not differentially affected Medicare utilization, compared to other forms of utilization review being conducted in nonactive PSRO areas. Some PSROs were associated with lower (favorable) utilization, while others reflected higher (unfavorable) utilization relative to their matched comparison areas. In addition, OPEL prepared a benefit-to-cost analysis, which indicates that 7 of the 18 PSROs had favorable benefit-to-cost ratios.

In addition to the OPEL study, many other studies have examined the cost effectiveness of PSROs. Since the program began, at least 24 PSROs have been attributed with savings by various studies of PSRO cost effectiveness. These claims of savings have appeared in the press, in a report requested by the Office of Management and Budget, or in correspondence to Members of Congress. Estimates of savings due to the activities of a PSRO have also been made during congressional hearings.

In a letter dated December 2, 1977, the Chairman, Subcommittee on Oversight, House Committee on Ways and Means, pointed out that the OPEL study did not determine the causes for the variations in the utilization rates and asked us to try to determine the causes for any significant increases or decreases in utilization rates observed at the 18 PSROs included in the study. The Chairman also asked that we review, on a sample basis, the validity of the claims of cost savings being made by individual PSROs. He requested that the sample include the Washington, D.C., PSRO, the Greater Sacramento PSRO, and any others that we believed appropriate. (See app. I.)

SCOPE OF REVIEW

Our review consisted of two phases: (1) determining the validity of claims being made about cost savings and (2) attempting to determine the causes for significant increases or decreases in Medicare utilization rates at the PSROs included in the OPEL study.

To determine the validity of claims being made about cost savings, we originally selected seven estimates of cost savings for validation. However, at the request of two PSROs we expanded our review to include nine such estimates. These estimates indicated savings of over $21 million plus 67,049 patient days of care. As part of our review, we met with officials of the PSROs included in the studies, officials of certain hospitals within the various PSRO areas, and officials responsible for compiling the data used to support the estimates. We also reviewed supporting data at these locations.

In determining the causes for significant increases or decreases in Medicare utilization rates at the 18 PSROs in the OPEL study, we selected 5 PSRO areas which showed changes in Medicare utilization of 5 percent or more. We met with officials and reviewed relevant documents at these PSROs. We also identified the hospitals in the PSRO areas and their comparison areas that accounted for significant amounts of the increases or decreases, and met with officials at these hospitals. The changes were discussed with officials of the health systems agencies in these areas. Health systems agencies are local nonprofit organizations, the purpose of which include restraining increases in the cost of providing health services. These agencies gather data on the health status of area residents and the health care delivery system; the number, type, and location of hospitals, nursing homes, etc., in the area; and the environmental and occupational exposure factors affecting health conditions.

The following schedule shows the PSROs reviewed and the phases covered.

Professional Standards Review Organizations
Included In This Review

PSRO	Estimates of cost savings validated	Causes for changes in hospital utilization identified
Multnomah Foundation for Medical Care, Portland, Oreg.	X	X
New York County Health Services Review Organization, New York, N.Y.	a/X	
National Capital Medical Foundation, Inc., Washington, D.C.	X	
Charles River Health Care Foundation, Wellesley Hills, Mass.	X	
Wyoming Health Services Company, Inc., Cheyenne, Wyo.	X	X
Southeastern Massachusetts PSRO, Inc., Middleboro, Mass.	X	
San Joaquin Area PSRO, Stockton, Calif.	X	X
Baltimore City Professional Standards Review Organization, Inc., Baltimore, Md.		X
Quad River Foundation for Medical Care, Joliet, Ill.		X
Sacramento Medical Care Foundation, Sacramento, Calif. (note b)	X	

a/Two estimates of cost savings were reviewed at this PSRO.

b/In 1972 the Sacramento Medical Care Foundation--not a PSRO--started a PSRO prototype review known as the Certified Hospital Admission Program. In March 1978, HEW published an evaluation of the Certified Hospital Admission Program. We reviewed the HEW evaluation.

As shown by the schedule, three PSROs were included in both phases of our review. In addition, we validated two estimates of savings for the New York County Health Services Review Organization.

CHAPTER 2

COST SAVINGS ESTIMATES:

PROBLEMS WITH DATA AND METHODOLOGIES

We reviewed nine estimates of PSRO cost savings. Eight of these estimates appeared in the press, in a report requested by the Office of Management and Budget, in correspondence to the Congress, or in testimony during congressional hearings. The ninth claim appeared in a letter from the PSRO requesting that we review the claim. All but one of these estimates were either prepared by a PSRO or prepared based on information provided by a PSRO. The other estimate was prepared by the Office of Research and Statistics, Social Security Administration. The estimates indicate PSRO savings of $21.4 million plus 67,049 patient days of care.

We adjusted the data used to compute the estimates to make the data as current, complete, and accurate as possible. Using these adjusted data and applying the same methods that were originally used (except in one case where a PSRO could not use the desired method because of a lack of data), we recomputed the estimated savings to be about $4.7 million, and 33,126 days of care. However, as discussed later, these figures are, in our opinion, highly questionable because of deficiencies in the methodologies used.

For the one case where we used a method different from that originally used, an official of the PSRO told us that the PSRO's estimate of savings was based only on changes in patients' average length-of-stay rather than on changes in total hospital days of care because the information needed to compute total days of care was not available when the estimate was prepared. The official indicated that to get a true picture of changes in hospital utilization, total days of care, not just changes in patients' average length-of-stay, should be compared. At the time of our review, the information to compute changes in total days of care was available and was used in our recomputation of estimated savings for this PSRO.

Summaries of the estimates reviewed and our adjustments to them appear in appendixes II through IX. Our recomputations of the savings are summarized in the following table.

PSRO area	Original estimate	GAO adjustment	Adjusted estimate
	Dollar savings		
Multnomah, Oregon	$ 7,327,800	$ -1,881,900	$5,445,900
New York County (1975-76)	3,060,000	-7,622,064	-4,562,064
Washington, D.C.	a/3,000,000	-1,332,180	b/,c/1,667,820
Charles River, Massachusetts	3,000,000	-2,765,625	234,375
Wyoming	2,709,951	-2,256,307	453,644
Southeastern Massachusetts	1,012,000	-754,572	257,428
San Joaquin, California	1,200,000	(d)	1,200,000
Sacramento, California (note e)	103,081	-55,758	47,323
	$21,412,832	$-16,668,406	f/$4,744,426
	Patient days saved		
New York County (1976-77)	61,049	-24,934	36,115
Southeastern Massachusetts	6,000	-8,989	-2,989
	67,049	-33,923	f/33,126

a/Represents a statement made by a PSRO official during a news conference. A news release prepared by the PSRO indicated that $2.7 million could have been saved if Medicare, Medicaid, and other public programs paid only for treatment that was medically necessary. (See p. 42.)

b/Includes $442,540 savings for patients not covered by a Federal program (i.e., local charity cases).

c/Includes $856,800 of savings that we did not verify because it would have required a prohibitive amount of time.

d/Methodology was not verifiable. (See p. 11.)

e/This estimate is for a prototype PSRO.

f/As discussed later, these amounts are, in our view, highly questionable because of deficiencies in the methodologies used.

A wide variety of methodologies were used to compute these savings, which basically fell into four categories:

--Five estimates were computed by comparing total Medicaid and/or Medicare days of care from one period to another and generally taking credit for any reductions.

--Two estimates represent reductions in the average lengths-of-stay for Medicare and Medicaid patients from a period before the start of PSRO review to a period after PSRO review, multiplied times the number of admissions for the period before PSRO review. The estimates assume that, were it not for the PSRO, these additional days of care would have been incurred.

--One estimate represents the number of days of medically unnecessary care that the PSRO was able to identify.

--One estimate represents the PSRO's estimate of the impact of PSRO concurrent review interventions.

After computing the number of days of care saved by one of the above methods, in all but three estimates these days were converted into dollar amounts by multiplying the days saved by actual or estimated hospital per-diem rates for routine services or by the per-diem rate plus an amount for ancillary services, such as operating rooms, laboratory services, and X-rays. In one estimate, the days saved were not converted into dollar amounts. An estimate by the Social Security Administration (SSA) for Sacramento, California, multiplied the days saved by 40 percent of the per-diem rate and indicated that the other 60 percent represented fixed costs which are incurred whether or not the hospital bed is occupied. In another estimate, only the Medicaid days were converted into dollars. Only two of the estimates--SSA and San Joaquin, California--considered the cost of performing patient review when they computed their estimate of savings. The SSA and San Joaquin estimates were reduced by $279,000 and $300,000, respectively, in consideration of these costs.

We noted several significant deficiencies in the data used in the estimates. Eight of the nine estimates used data that were incomplete and/or included as days saved certain days that the PSRO did not certify as medically necessary, but which were still paid. In addition, although our review was not directed at identifying and correcting methodological problems, we noted several significant problems in the methodologies used. We also identified some computation errors.

INCOMPLETE UTILIZATION DATA

The most significant problem we noted was the use of incomplete hospital utilization data. This problem existed in eight of the nine estimates reviewed, and accounts for the entire adjustments that were made to the Wyoming estimate and to the 1976-77 New York County estimate.

To obtain 1975 utilization data, the Wyoming PSRO used Medicare utilization data obtained from SSA in March 1976, or only 3 months after the end of 1975. According to SSA officials, their files do not reflect total utilization data until 18 to 24 months after the close of the year. We recomputed the savings using more recent and complete Medicare utilization data and concluded that the estimate of savings was overstated by more than $2 million. The Wyoming PSRO informed HEW that it was not in any way claiming that its activities were the only factor causing the reduction in utilization. However, when HEW reported this savings estimate to the Office of Management and Budget, this qualifying statement was not included.

New York County's 1976-77 estimate was generally based on 1976 utilization data obtained from Uniform Statistical Reports, which are submitted by the hospitals to the New York Blue Cross as a basis for reimbursement negotiations. However, when the study was made, these data were not available for 1977. As a result, 1977 data were generally obtained directly from the hospitals by the PSRO. Officials at all hospitals in the study informed us that the best source of utilization data is the Uniform Statistical Reports. We recomputed the savings based on 1976 and 1977 utilization data obtained from the Uniform Statistical Reports and concluded that the New York County PSRO overstated its claimed savings by about 25,000 patient days.

INCLUSION OF DAYS NOT CERTIFIED AS MEDICALLY NECESSARY BUT PAID ANYWAY

Three of the estimates included, as savings, patient days which were not certified by the PSRO as medically necessary, but were nonetheless paid by Medicare or Medicaid. These types of days fall into three categories:

1. Administratively necessary days--as used here these days are spent in an acute care hospital by Medicaid patients, and in some areas Medicare patients, who are waiting to be placed in a long-term care facility.

2. Grace days--for the time periods covered by these estimates, the Social Security Act contained a provision whereby Medicare hospital patients who were determined to need no further care in the institution were allowed an additional 3 days of benefits to give them time to arrange for their postdischarge care.

3. Denied days paid--these are days that the PSRO denied for payment, but were erroneously paid anyway.

The estimate for the Washington, D.C., PSRO area included as savings, days of care for all three of these categories. To compute the estimate, PSRO officials included as days saved, days of care that Medicare and Medicaid patients spent in the hospital that the PSRO had not certified as medically necessary.

The most significant category of days that were included as days saved, even though they were paid, were administratively necessary days for patients waiting to be placed in a long-term care facility, such as a nursing home. These days accounted for $961,660 of the estimated savings for the Washington, D.C., PSRO. The PSRO's executive director informed us that if long-term care beds were available, the $961,660 would have been saved. He attributed the lack of long-term care beds to businessmen's belief that the nursing home business is not profitable in the District of Columbia.

In addition, the estimate for the Washington, D.C., PSRO did not consider the fact that, after the PSRO has determined that it is no longer medically necessary for the patient to be in the hospital, Medicare patients were entitled to an additional 3 grace days of benefits to arrange for their postdischarge care. As a result, we estimate that approximately 183 grace days, or over $25,000, were incorrectly included in the estimate of savings. In October 1977, after the period covered by the PSRO's estimate, the provision for grace days was revised by Public Law 95-142 (42 U.S.C. 1320c-7). Currently, when a PSRO disapproves institutional care, payment may be made only for services furnished for 1 day after the day on which the provider received notice of the disapproval, unless the PSRO determines that an additional 1 or 2 days is required to arrange postdischarge care.

The Washington, D.C., PSRO estimate also included $909,300 of savings which represents days of care for Medicaid patients that the PSRO had determined to be medically unnecessary. These days of care do not qualify as either grace days or administratively necessary days, and by law the Federal Government should not have shared in the cost of these days of care. However, an undetermined portion of these costs was inappropriately charged to the Federal Government and, at the time the PSRO made its claim, restitution had not been made for any of these costs. The payment for these inappropriate charges was discussed in an October 1977 HEW audit agency report. The report stated that the District of Columbia Medicaid agency did not have procedures or controls to prevent charging the Federal Government for Medicaid claims denied by the PSRO. The report identified denied patient days paid which account for $52,500 of the PSRO's savings. Moreover, the report indicated that other denials may have also been paid and recommended that all denied claims be reviewed and the Federal Government reimbursed accordingly.

ESTIMATE NOT VERIFIABLE

The basis for estimated savings claimed by the San Joaquin, California, area PSRO is subjective and not verifiable. The $1.2 million estimated savings is the PSRO's estimate of annual savings resulting from interventions by the PSRO review system for care being provided to Medicare and Medicaid patients. The PSRO identified four events that it believes affect physician behavior and, in turn, hospital utilization:

--Requests for information from the attending physician by the PSRO nurse to determine what level of care the patient needs; i.e., acute hospital care, care in a nursing home, etc.

--Notification to the attending physician that a level of care determination of less than acute hospital care will be made within 24 hours unless additional information supporting the need for acute care is provided.

--Notification to the attending physician that a formal determination has been made that the patient's level of care is less than acute; however, continued stay at the acute hospital is necessary because no feasible alternate facilities are available.

--Notification to the attending physician that a formal determination has been made that the patient's level of care is less than acute and continued stay at the acute hospital will not be certified as necessary by the PSRO.

Based on the opinions of its nurses, the PSRO determined the average number of days saved each time one of the above events occurred. This was done by having six of its nurses record for a 10-day period (1) the number of times each of these events occurred and (2) their estimate of the number of days that were saved because of each event. The nurses did not record identifying information on the patient, attending physician, hospital, date, etc. The data were used to determine the average number of days saved for each of the above events. The averages, which ranged from 2.3 days to 4.5 days, were used to determine the total number of days saved, which was converted to dollar savings by multiplying the days by the average cost of a hospital day in California and deducting the PSRO's costs of making utilization reviews.

We are unable to verify this claim of estimated savings because the basis for the savings is the PSRO nurses' estimates of the number of days that were saved because of various events in the PSRO review process. In our opinion, these estimates are very subjective. In addition, records were not maintained that would allow us to determine the subsequent disposition of the patients upon which these estimates were based. For example, if a PSRO nurse determined that 5 days were saved because the attending physician was notified that the patient no longer needed acute hospital care, we could not determine if the patient was discharged, or if the attending physician successfully appealed the determination.

PROBLEMS WITH METHODOLOGIES USED IN DEVELOPING SAVINGS ESTIMATES

Our work focused on validating the accuracy and completeness of the data and was not directed at identifying problems with the methodologies used in developing estimates of cost savings. Nevertheless, we did note several deficiencies in the methodologies used. Although we did not adjust the estimates of savings to correct for these deficiencies, we believe these deficiencies raise serious questions about attributing changes in hospital utilization to PSRO review. Various estimates included the following deficiencies:

--The impact on hospital utilization by factors other than PSRO review was not taken into account in seven of the estimates.

--When determining the value of a day saved, consideration was not given by seven of the estimates to the fact that certain hospital costs are fixed and not dependent on the number of patients.

--Two estimates computed savings based on changes in patient length-of-stay without taking into account changes in the number of admissions.

--Eight of the studies did not consider additional costs that may have been incurred for alternate care that may have been provided.

The only estimate that considered all these factors was the estimate SSA prepared on the Sacramento, California, area.

Factors other than PSRO review can affect hospital utilization

Seven of the nine estimates that we reviewed computed savings by comparing hospital utilization from one period of time to a later period or by computing changes in average patient length-of-stay from one period to a later period and multiplying this by the number of admissions or discharges for one of the periods. These estimates reflect changes in the number of patients admitted to the hospitals and/or changes in the average length of time that the patients stay in the hospital. Only two of the seven studies considered the fact that something other than PSRO review could be causing the changes. For the Sacramento, California, area, the estimate compared that area to nearby areas to distinguish between changes in utilization occurring in general and those attributable to PSRO-type review. The study for the Multnomah, Oregon, area, is based on changes in patient average length-of-stay from 1974 to 1975. The study adjusted the change in the Multnomah area by 0.1 day to reflect a regional decline in the average length-of-stay.

Examples of factors other than PSRO review that can affect estimates of savings occurred in both of the New York County estimates. The New York County (1976-77) estimate, after our adjustment, shows a decrease of 36,115 patient days of care from 1976 to 1977 at seven New York County hospitals. That decrease consists of a 39,597-day decrease in Medicaid utilization offset by a 3,482-day increase in Medicare utilization. During this period the Medicaid law in New York was

changed. According to a New York State Medicaid official, these changes have (1) limited hospital admissions on weekends, (2) reduced the number of elective surgeries, and (3) caused certain procedures, which were often performed in an acute care setting, to be performed on an outpatient basis. Therefore, it seems reasonable to assume that the changes in the State Medicaid law, in addition to any PSRO activities, would have had a positive effect on reducing Medicaid utilization in the seven hospitals included in the study.

The New York County (1975-76) estimate, after our adjustments, shows that Medicare and Medicaid utilization increased from 1975 to 1976 by about $4.6 million at the seven hospitals in the study. Of this amount, $3.8 million is attributable to an increase in the number of patients discharged. During this period, 6 of the 39 hospitals in New York County closed. It seems reasonable that a portion of the $3.8 million increase could be attributable to the redirection of some patients from the six closed hospitals to the seven hospitals in the study. Thus, we believe it would be incorrect to attribute the increase in utilization at the seven hospitals to the PSRO's activities. Nevertheless, applying the corrected data to the PSRO estimate produced this result.

Examples of other factors that can affect hospital utilization and thus affect estimates of savings are discussed on pages 23 through 27 of this report.

Fixed costs should be eliminated when determining the value of a day saved

All nine estimates computed days of care saved. Seven of the nine converted days of care into dollar amounts by multiplying the days saved by actual or estimated hospital per-diem rates for routine services or, in one case, by the per-diem rate adjusted to include an amount for ancillary services, such as operating rooms, laboratory services, and X-rays.

This practice does not recognize the fact that a portion of the costs are fixed and are incurred whether or not the hospital bed is occupied. The study for the Sacramento area did recognize that a portion of the costs are fixed, and multiplied the number of days saved by 40 percent of the per-diem rate on the assumption that the remaining costs were fixed and were incurred whether or not the hospital bed was occupied. The study indicates, however, that if in the long run reductions in utilization lead to reductions in available

beds and/or reorganization of hospital resources, then fixed costs may also be saved. The New York County 1976-77 estimate did not convert days saved into dollar savings.

Savings based only on changes in patient length-of-stay without considering changes in number of patients discharged

After our adjustments, two of the nine estimates of savings reflect changes in patient average length-of-stay (ALOS) from one period to a later period, multiplied by the number of admissions for the later period. The claims imply that, were it not for the PSRO, all or part of the additional days of care would have been incurred.

According to HEW officials, this is not an acceptable method for computing reductions in hospital utilization. One official explained that reductions in ALOS should not be used to compute savings because (1) reductions in ALOS can be caused by something other than PSRO review, (2) reductions in ALOS can result if PSRO review causes the patients to be discharged too soon, and (3) correction of certain inappropriate hospital utilization practices by PSRO review can result in a longer ALOS.

He explained that something as simple as an increase in the number of referrals from one hospital to another can reduce the ALOS. For example, a patient can spend 1 day in hospital "A" and then be referred to hospital "B," where the patient spends 3 days. The length-of-stay is 4 days. However, because most studies determine the number of patients by counting either admissions or discharges, this patient would be counted twice and the ALOS would be 2 days (4 days divided by 2 discharges). Both of the estimates included in our review used patient admissions to calculate the number of patients.

Another factor that could reduce the ALOS would be an increase in the number of readmissions. The HEW official explained that the ALOS would decrease if the PSRO were causing patients to be discharged earlier than they should be. This could cause many of them to be readmitted, which would probably result in more total days of care, but because the patient may be counted more than once, the ALOS would probably decrease.

The official also explained that good PSRO review could result in an increase in ALOS. He stated that a PSRO area

may have a substantial number of unnecessary admissions for procedures that could be performed on an outpatient basis or in the doctor's office. These procedures are usually associated with a short ALOS. If the PSRO is effective in preventing these unnecessary admissions, the ALOS should increase.

Therefore, more factors can affect estimates which are based only on changes in patient length-of-stay than can affect estimates based on changes in total days of care from one period to another. These additional factors can make an effective PSRO look bad--elimination of certain inappropriate hospital utilization practices which involve short stays--and can make an ineffective PSRO look good--causing patients to be readmitted because PSRO review resulted in their being discharged too soon.

Offsetting costs can affect savings

When PSRO review results in discharging a patient early, or eliminating an admission, the Government may incur offsetting charges for alternative forms of care, such as skilled nursing care. None of the studies that we reviewed included adjustments for these offsetting charges, although the estimate for the Sacramento area recognizes that such offsetting charges exist. However, the study indicates that the data needed to compute the amount of offset were not available, and therefore no computation of the amount of the offset could be made.

CONCLUSIONS

Eight of the nine estimates of savings that we reviewed were overstated. The ninth estimate was computed using a methodology that is not verifiable. The nine estimates reported savings totaling $21.4 million plus 67,049 patient days. However, because of deficiencies in the data used in the estimates and some computation errors, the estimates of savings were overstated by about $16.7 million (78 percent) and 33,923 patient days. In one case, the data used by the PSRO in estimating savings were so inaccurate that after correcting it, the adjusted estimate produced a negative dollar savings.

Also, because of deficiencies in the methodologies used to compute savings, we believe that any remaining savings are highly questionable. Although a variety of methods were used to compute the estimates of savings, we believe that the

methodology used in the study for the Sacramento, California, area is the most defensible if PSRO program accomplishments are to be expressed in terms of savings.

In view of the significance being placed on the various evaluations of the cost-effectiveness of PSRO review activities, we believe that estimates of PSRO cost savings should be based on current, complete, and accurate data and that they be computed using appropriate methodologies.

RECOMMENDATIONS

We recommend that, to assist PSROs that plan to make estimates of savings, the Secretary of HEW direct the Administrator, Health Care Financing Administration to

--provide technical assistance to help PSROs prepare the assessments, particularly in the area of validating the data to be used; and

--develop standard methodologies that can be used by the PSROs to measure their effectiveness in reducing hospital utilization.

HEW COMMENTS AND OUR EVALUATION

In commenting on our report (see app. X) HEW took the position that the types of savings estimates discussed in this chapter (which usually reflected gross changes in utilization expressed in dollars) should not be attempted by individual PSROs because (1) gross changes in utilization and estimates of savings from utilization reductions can best be done on a national scale using the methodology in HCFA's 1978 evaluation and (2) PSROs do not have the capability to develop accurate estimates of the cost of a hospital day saved.

Our recommendations for providing technical assistance were aimed at those PSROs that planned to make and publicize such estimates of savings; therefore, to the extent that HEW succeeds in discouraging such activity, our recommendations would not apply.

On the other hand, if for public relations or other purposes, PSROs persist in providing estimates of cost savings to the public and the Congress, then HEW has an obligation either to curtail such activities or to take steps to see that the information released is reasonably accurate and current.

In response to our recommendations for providing PSROs with technical assistance, HEW did list a series of useful steps that were being undertaken; however, the thrust of these actions appear to be in the areas of improving the management of PSROs and of implementing HEW's policy of requiring PSROs to set specific impact objectives to deal with utilization and quality problems.

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The comments of the individual PSROs discussed in this chapter are included in appendixes II through VIII.

CHAPTER 3

OPEL'S EVALUATION OF MEDICARE HOSPITAL UTILIZATION

During the fiscal year ended September 30, 1977, HEW's Office of Planning, Evaluation, and Legislation in the Health Services Administration made an evaluation of the PSRO program which was issued in final form in February 1978. As a part of this evaluation, OPEL analyzed Medicare data to determine the effects of the PSRO program on hospital utilization. Eighteen PSROs were evaluated. OPEL concluded that 7 PSROs were associated with decreased hospital utilization relative to their matched comparison areas and 11 PSROs were associated with increased utilization relative to their comparison areas.

For the five PSRO and six comparison areas included in our review of the causes of significant increases and decreases in utilization, we identified problems with the data used by OPEL. In one PSRO area, these problems significantly altered an OPEL determination about changes in the amount of hospital utilization.

Changes in hospital utilization from 1974 to 1976 were often caused by factors other than PSRO review. However, hospital officials in two PSRO areas informed us that PSRO review had an impact on reducing hospital utilization. Based on corrected data, these are the only PSRO areas included in this phase of our review that clearly experienced lower hospital utilization.

PROBLEMS WITH DATA USED BY OPEL

The data used by OPEL were inaccurate in two areas. For the five PSRO areas and six non-PSRO comparison areas, data used by OPEL included statistics for 225 hospitals. However, 20 of the hospitals should not have been included in the study, and 3 hospitals were inappropriately excluded. Secondly, Medicare eligibility data were inappropriately compiled based on the population within the boundaries of the PSRO or comparison areas rather than on the population served by the hospitals located within the boundaries of the PSRO or comparison areas. HEW officials informed us that they were aware of these problems and were taking steps to resolve them for future studies. However, as discussed on pages 28 and 29, the problem of inappropriate hospitals also appeared in the follow-on study to the OPEL study.

Inappropriate hospitals included in Medicare data

The data used by OPEL in its Medicare hospital utilization analysis were compiled from Medicare claims history files which at the time were maintained continuously by the Social Security Administration. SSA provided OPEL with data which were compiled by PSRO and comparison areas. These data did not show information on individual hospitals. However, for our purposes, we obtained data showing utilization by individual hospitals. Field examination of these data disclosed that 20 hospitals were inappropriately included in the OPEL evaluation and that 3 hospitals were inappropriately excluded. This information is shown in the following table.

PSRO and comparison areas	Number of hospitals			
	Included in OPEL evaluation	Inappropriately included	Inappropriately excluded	Correct number
Multnomah, Oregon	15	1	1	15
San Francisco, California (note a)	22	3	-	19
Baltimore, Maryland	18	3	2	17
Philadelphia, Pennsylvania (note a)	41	3	-	38
Quad River, Illinois	8	2	-	6
Crescent Counties, Illinois (note a)	25	5	-	20
Wyoming	31	1	-	30
Nevada (note a)	23	-	-	23
San Joaquin, California	14	-	-	14
Fresno, California (note a)	14	-	-	14
Bakersfield, California (note a)	14	2	-	12
	225	20	3	208

a/Comparison areas.

The 20 hospitals that were inappropriately included were

--classified inappropriately as short-term acute care hospitals,	7
--not within the boundaries of the PSRO or comparison area, or	4
--not subject to PSRO review (military hospitals, Public Health Service Hospitals, etc.).	9
	20

Of the three hospitals that should have been included but were not, (1) two had been classified as specialty hospitals but were providing the same services as short-term acute care hospitals and (2) the other--a Health Maintenance Organization clinic--opened in 1975, outside the PSRO area, but draws a directly proportional number of patients from the Health Maintenance Organization's principal hospital located in the PSRO area.

The most significant effect of these problems was noted in our review of Medicare utilization changes in the Quad River, Illinois, PSRO area and its comparison area, Crescent Counties, Illinois. The OPEL evaluation concluded that the Quad River PSRO area was associated with a substantial reduction in Medicare utilization and exhibited the highest benefit to cost ratio for the 18 PSRO areas in this part of the OPEL evaluation. Our analysis of the data used by OPEL disclosed that utilization statistics for two long-term State psychiatric institutions had been included in the data for the PSRO area. The PSRO had no review responsibility for these institutions.

These institutions reported over 13,000 Medicare days of care in 1974 and only 1,900 in 1976. The decrease was primarily the result of the change in population served by one of the institutions. The institution became a mental retardation center for the young.

Exclusion of statistics for (1) two psychiatric institutions, (2) five hospitals that were erroneously included in the comparison area, and (3) other minor adjustments, reduced the Medicare utilization rate to a point where the

Quad River PSRO can no longer be considered cost beneficial by the OPEL study. 1/

The table below illustrates the effect of using inappropriate hospitals to measure changes in the rate of Medicare utilization per 1,000 enrollees. For the five PSRO areas we studied, the table shows the results of OPEL's analysis, based on 225 hospitals, in terms of (1) percent of utilization change within each PSRO area, (2) percent of utilization change as it relates to the comparison area, and (3) benefit to cost ratio. The last three columns show the same data after we adjusted them for the 20 hospitals that were inappropriately included and the 3 hospitals that were inappropriately excluded from the data used by OPEL.

Professional Standards Review Organizations
Percent of Increase or Decrease (-) in
Medicare Utilization per 1,000 Enrollees
from 1974 to 1976

	Per OPEL study			After GAO adjustment		
PSRO	Change within PSRO area	Change relative to comparison area	Benefit cost ratio	Change within PSRO area	Change relative to comparison area	Benefit cost ratio
Wyoming	-12.1	-15.0	6.4:1	-15.8	-18.6	7.7:1
Quad River, Illinois	-10.5	-10.7	8.0:1	-2.3	-0.4	.9:1
Multnomah, Oregon	-8.9	-12.2	7.5:1	-6.8	-10.2	6.3:1
San Joaquin, California	5.0	4.9	-	5.0	4.8	-
Baltimore, Maryland	11.4	10.6	-	11.7	11.0	-

1/After receiving HEW's comments on our report, we reviewed the data included in the follow-on study to the OPEL evaluation--Health Care Financing Administration's 1978 program evaluation issued in January 1979--and learned that the data still includes information on the two psychiatric institutions and five hospitals.

Inappropriate eligibility data

Another problem that we noted with the data used by OPEL, although its effect is not quantified, is that the Medicare eligible population was identified based on the official residence of the enrolled person and is restricted to the boundaries of the PSRO and comparison areas. Many hospital officials informed us of a significant Medicare patient origin outside of these areas. For example, two hospitals accounting for 28 percent of the increase in Medicare hospital utilization in the Baltimore, Maryland, PSRO area reported that during 1976, 51 percent of their patients over age 65 came from areas outside the city limits.

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We discussed these problems with OPEL officials as early as April 1978 and were informed that they were aware that there were problems with the Medicare data, but there was not enough time to validate the data. They contended that the data were the best available at the time. We were advised by HEW officials that, for the analysis being done as a follow-on to the OPEL study, (PSRO 1978 Program Evaluation) steps were being taken to assure that these problems were resolved before the data would be used again in the PSRO program evaluation. However, as discussed on pages 28 and 29, the 23 hospitals are treated in the same manner in the 1978 program evaluation as they were in the OPEL evaluation.

FACTORS INFLUENCING MEDICARE UTILIZATION CHANGES

We were informed that the increases or decreases in hospital utilization rates could be attributable to a variety of factors, such as changes in

--medical services,

--medical practice,

--number and availability of physicians,

--availability of home health care,

--availability of nursing home beds, and

--changes in Medicare population.

In addition, PSRO review was cited as a factor in the two PSRO areas which clearly experienced lower Medicare utilization based on corrected data.

It was not possible to statistically measure the influence of each factor on the overall change; however, we believe that these factors had a significant impact on the changes in hospital utilization.

Changes in medical services

In 1976, over 10,000 additional Medicare days of care at one Baltimore hospital can be attributed to the opening of a cancer treatment center. This accounted for 16 percent of the increased hospital days in that city from 1974 to 1976. In addition, new or expanded hospital units providing coronary care, 24-hour emergency service, and physical medicine and rehabilitation were cited as factors influencing the increased Medicare utilization in Baltimore, Maryland, and in San Joaquin, California.

Changes in medical practices

We were informed that decreases in Medicare utilization at the Multnomah, Oregon, and Quad River, Illinois, PSROs were partially influenced by changes in medical practices. Hospital officials in Quad River noted that more preoperative workups are being done on an outpatient basis, possibly because of increasing outpatient coverage by intermediaries and/or utilization review. Increased outpatient surgery for ear, nose, and throat cases was noted at these hospitals.

Hospital officials in the Multnomah PSRO area cited a conscious effort to eliminate overnight stays for patients requiring radiation treatment and blood transfusions as a change in medical practice which can result in reduced utilization. Multnomah PSRO area hospitals were also avoiding Friday hospital admissions for weekend workups in preparation for surgery scheduled for the following Monday. Although PSRO review could result in these types of savings, PSRO and hospital officials cited improvements in technology and testing procedures as being a major influence in these changes in medical practices.

Changes in number and availability of physicians

A number of physicians were added to the staffs of hospitals experiencing significant Medicare hospital utilization increases. Specifically, increases were noted in the

number of physicians emphasizing specialties generally associated with Medicare patients. Significant physician increases were noted at hospitals in the Quad River, Illinois; Nevada; San Joaquin, California; and Philadelphia, Pennsylvania; PSRO areas. For example:

--During calendar years 1974-76, over 50 staff appointments were made to a Philadelphia hospital.

--Increases in the number of fracture cases at a hospital in the Quad River PSRO area were attributed to increases in the number of orthopedic physicians.

--The physician population in Nevada increased 21 percent from 1974 to 1976.

Changes in home health care availability

Among the factors noted as contributing to reduced Medicare hospital utilization in the Quad River, Illinois, and Multnomah, Oregon, PSRO areas was the influence of active home health care programs. For Quad River area hospitals, home health care services are provided by the county health department. By assisting in the hospitals' discharge planning process, the county health department is able to have patients discharged earlier into the care of visiting nurses in the patients' homes. At one hospital, the number of Medicare patients admitted to the home health care program increased 59 percent from 1974 to 1976. Total annual visits went from 5,507 in 1974 to 8,749 in 1976.

Changes in nursing home bed availability

A frequently mentioned factor affecting Medicare utilization is the problem in placing patients in subacute level of care facilities, such as skilled nursing facilities. The problem is caused not only by an actual shortage of beds, but also by limitations placed by the nursing homes on the types of patients admitted.

A shortage of nursing home beds was noted in the Baltimore, Philadelphia, San Joaquin, San Francisco, and Multnomah PSRO areas. Hospital officials in these areas complained that the shortage of beds becomes more serious because existing nursing homes prefer private patients since Medicare patients often become Medicaid patients after their Medicare benefits have expired. Many nursing home officials do not

consider Medicaid reimbursement to be sufficient to cover the cost of care at the highly skilled level. 1/

Hospital officials stated that the ability to place patients in subacute level of care facilities promptly would definitely reduce Medicare utilization.

Changes in Medicare population

Inner-city hospital officials in Baltimore, Philadelphia, and San Francisco, as well as officials in the San Joaquin, and Nevada PSRO areas, cited changes in the Medicare population as a factor in the increased hospital utilization. Inner-city hospital officials reported significant increases in the proportion of Medicare patients to the overall hospital census. Officials explained that the younger patients are moving to the suburbs, leaving the patients over age 65 in the inner city. Also, hospital officials in San Francisco indicated that because inner-city hospitals are more fully equipped (including the use of new life-support systems) they tend to handle the more difficult cases.

The increase in Medicare population in the San Joaquin and Nevada PSRO areas was attributed to attractions for retired people. Population projections obtained from the Health Systems Agencies in Reno and Las Vegas showed the population over age 65 had increased about 15 percent in the Reno area and about 8 percent in the Las Vegas area for the period 1974 to 1977. Although changes in population in the San Joaquin and Nevada PSRO areas resulted in increases in the number of Medicare patient days at certain hospitals, it is questionable whether this change in population affected the rate per 1,000 enrollees as used in the OPEL study.

PSRO review activity

In two of the five active PSRO areas visited, according to hospital officials, PSRO review activity had contributed significantly to Medicare hospital utilization reductions.

1/In a previous report, "Ohio's Medicaid Program: Problems Identified Can Have National Importance" (HRD-78-98A, Oct. 23, 1978), we noted that several PSROs have reported that their ability to reduce hospital costs under the program has been limited because of the difficulty in transferring relatively sick patients to skilled nursing care facilities.

These two PSRO areas--Multnomah, Oregon, and Wyoming--clearly experienced lower utilization based on corrected OPEL study data.

As noted on page 22, after our adjustments to the Medicare data, the data showed a decrease in Medicare utilization per 1,000 enrollees from 1974 to 1976 in relation to their comparison areas of 18.6 percent for the Wyoming PSRO area and 10.2 percent for the Multnomah PSRO area. After adjustment, the other three PSRO areas included in our review showed either an increase, or a decrease of less than 1 percent in Medicare utilization in relation to their comparison areas.

In Wyoming, four of the six hospitals visited experienced a reduction in Medicare utilization. Officials at each of the four hospitals explained that PSRO review activity influenced utilization by making the doctors more cost conscious.

Multnomah PSRO area hospital officials expressed similar views. They added that the PSRO review process forced physicians to stay current with the progress of their patients and provided a governmental body to blame for stopping Medicare or Medicaid payments, thus forcing those patients who were reluctant to leave the hospitals to do so.

CONCLUSIONS

Our review substantiates the OPEL study findings that Medicare utilization was influenced by numerous factors including, in some instances, PSRO review.

Furthermore, we identified several problems with the SSA data used by OPEL in its evaluation of the PSRO program. Specifically, the statistics included information on hospitals which should not have been included because they were (1) inappropriately classified as short-term acute hospitals, (2) not within the responsibility of the PSRO, or (3) not within the PSRO area. The statistics also did not contain information for three hospitals which should have been included. In addition, the statistics for Medicare enrollments did not reflect the fact that, in some instances, a large percentage of the patients treated were from outside the PSRO or comparison areas. Most of the problems noted could only have been identified through onsite visits and an extensive validation process.

In view of the significance being placed on the various evaluations of the cost-effectiveness of PSRO review activities and the relatively small changes in utilization which

could cause a PSRO to be termed cost-effective, we believe that it is particularly important that the basic data used in such evaluations be as complete and accurate as possible.

In bringing our findings to HEW's attention, we proposed that the Secretary require an extensive validation of HEW data, including site visits, to assure that the data are complete and accurate before they are used to evaluate PSRO effectiveness.

HEW COMMENTS AND OUR EVALUATION

HEW did not agree with our proposal. HEW stated that the Medicare data used in HCFA's 1978 PSRO program evaluation had been corrected to include the appropriate hospitals and had been adjusted for migration. HEW also said that it was continuing to validate the Medicare data on an ongoing basis through the use of independent data collected from PSROs. In addition, HEW stated that site visits would be very expensive to make, would not significantly improve the validity of the Medicare data, and were not necessary.

Our proposal was intended to be helpful to HEW in undertaking the admittedly complex task of measuring PSRO savings resulting from reductions in utilization. As mentioned previously in this chapter, the data compiled for the 1977 OPEL evaluation did not show information on individual hospitals so the problem of reporting inappropriate hospitals would have been obscured. To determine the causes for any significant increases or decreases in utilization rates as requested by the Subcommittee on Oversight, we wanted to isolate and identify the variations by specific hospitals. Therefore, we obtained additional data from social security files on this basis. Despite having this information, however, it was not until we actually visited the PSRO areas that we discovered such problems as hospitals being excluded from the OPEL evaluation because they were improperly classified as specialty hospitals and hospitals being included which were outside the PSRO or comparison area. Therefore, we believed it would be helpful in assuring the validity of the data being used in these important evaluations, if their accuracy was validated or confirmed in the field by individuals knowledgeable of conditions in the local PSRO areas.

After receiving HEW's comments, we reviewed the data pertaining to HCFA's 1978 PSRO evaluation and noted that the question of migration had been taken into account. We also noted, however, that all 23 hospitals we reported as being inappropriately included or excluded in the 1977 OPEL study

were treated in the same manner in the 1978 PSRO program evaluation. Accordingly, we still believe there is a need for HEW to assure the validity of the PSRO data. These validations do not necessarily have to result from site visits; rather, they can be performed in the field by individuals knowledgeable about conditions in the local PSRO areas.

RECOMMENDATION

We recommend that the Secretary require an extensive validation of HEW data, including onsite validation by individuals knowledgeable of conditions in the local PSRO areas, to assure that the data are complete and accurate before they are used to evaluate PSRO effectiveness.

APPENDIX I

COMMITTEE ON WAYS AND MEANS

U.S. HOUSE OF REPRESENTATIVES

WASHINGTON, D.C. 20515

SUBCOMMITTEE ON OVERSIGHT

December 2, 1977

Honorable Elmer B. Staats
Comptroller General
General Accounting Office
Washington, D.C. 20548

Dear Mr. Staats:

In fiscal year 1977, the Professional Standards Review Organization program cost $103 million to operate and it is estimated that the program will cost about $150 million in fiscal year 1978. A draft report prepared by the Office of Planning, Evaluation and Legislation, Health Services Administration, concludes that as a "treatment," the Professional Standards Review Organization program thus far has not impacted on hospital utilization. The report further states that while no overall utilization savings were found, individual experiences varied. Some of the organizations were associated with lower (favorable) utilization while others reflected higher (unfavorable) utilization. Specifically, the report states that six of eighteen PSROs included in the study were found to be cost-beneficial. However, the study did not determine the causes for the variations in the utilization rates. Therefore, we would like the General Accounting Office to attempt to determine the causes for any significant increases or decreases in utilization rates observed at the eighteen PSROs included in the study.

In addition, the Subcommittee is aware that many individual PSROs have been making claims of cost savings. For example, on November 11, 1977, The Washington Post reported that the National Capital Medical Foundation PSRO program has saved the U.S. Government $3 million in the past year.

The Subcommittee would like the General Accounting Office to review on a sample basis the validity of the claims being made by individual PSROs with respect to cost savings. The sample should include the Washington PSRO, Greater Sacramento PSRO, and any others that you believe appropriate.

APPENDIX I

We would appreciate your being prepared to testify on these matters in June, 1978, and to provide us with a written report in November, 1978. As always, my Subcommittee would be happy to elaborate on this request. Thank you for your attention to this very important matter.

Sincerely,

Sam M. Gibbons, Chairman
Subcommittee on Oversight

SMG:PP:vs

APPENDIX II

DESCRIPTION OF ESTIMATE OF SAVINGS FOR THE MULTNOMAH, OREGON, PSRO AND ITS COMMENTS ON OUR REPORT

The Multnomah Foundation for Medical Care, the PSRO from Multnomah County, Oregon, contracted with a data processor to prepare an estimate of its impact on the cost of care in the hospitals it reviews. The results of this assessment were reported in HEW's October 5, 1976, report to the Office of Management and Budget. The estimate shows total savings for Medicare and Medicaid patients of over $7.3 million. We selected this estimate because we had to visit this PSRO as a part of our work to determine changes in Medicare hospital utilization as reported in the OPEL study and because HEW officials advised us Multnomah was an exemplary PSRO.

The estimate compares the average length-of-stay for Medicare and Medicaid patients for all or a part of 1974--before the implementation of PSRO review--to the ALOS for 1975 patients--after implementation of PSRO review. The ALOS for Medicare and Medicaid patients dropped 1.2 and 2.0 days, respectively. The reduction was adjusted by 0.1 day to account for a regional decrease from 1974 to 1975 in ALOS for patients in the Western United States--Montana, Wyoming, Colorado, New Mexico, Idaho, Utah, Arizona, Nevada, Washington, Oregon, and California.

The net change for Medicare and Medicaid patients, 1.1 and 1.9, respectively, was then multiplied by the total admissions for the baseline period (1974) to determine the estimated number of hospital days saved. As a result, it was estimated that 33,654 Medicare patient days and 15,198 Medicaid patient days were saved. Using $190 as the cost of a hospital day and adjusting it to $150 to reflect the fact that the days of care saved would primarily be during the latter part of the patients' stay, with few ancillary services (such as X-rays and lab tests) being provided, it was estimated that the annual reduction in Federal program costs was $7,327,800.

We made three adjustments to the data used to compute the estimate of savings and then recomputed the savings using the same methodology used in the original estimate. First, information on the number of patients treated during the pre-PSRO period was supplied to the PSRO by the hospitals, one of which overstated its Medicare figures by 1,680 days.

The PSRO based its savings on the number of patients in the baseline period and thus inflated the savings estimate by about $1.0 million.

Second, the PSRO adjusted its ALOS figures to account for regional trends. The adjustment--0.1 day--was based on changes for all patients for a large geographic area. Data supplied to us by HEW's Office of Policy, Planning, and Research in the Health Care Financing Administration show that the Medicare ALOS in Oregon, Washington, and Idaho (excluding Multnomah County) declined by 0.5 days from 1974 to 1975. Similar data for Medicaid (including Multnomah County statistics) show that the ALOS increased by 0.6 days between 1974 and 1975. By recomputing the estimate, using the more localized figures for changes in ALOS, we concluded that the estimate of savings was overstated by about $0.9 million.

Third, statistics reported by one hospital for the pre-PSRO period were for a 10-month period, thus requiring that the PSRO annualize them to arrive at the correct number of Medicare and Medicaid patients to be included in its estimate of savings. The PSRO failed to annualize the number of Medicaid patients and incorrectly annualized the number of Medicare patients, resulting in an understatement of Medicaid patients by 461 and an overstatement of Medicare patients by 294. This resulted in the estimate of savings being understated by about $76,000.

A summary of these adjustments is shown below.

Original estimate		$7,327,800
Less GAO adjustments:		
Overstatement of patients in pre-PSRO period	$1,046,948	
Use of more accurate figures for regional changes in ALOS	910,845	
Errors made in annualizing number of patients	(75,893)	1,881,900
Adjusted estimate of savings		$5,445,900

APPENDIX II

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The Multnomah PSRO stated that based on its involvement in the evaluation activity, our report is accurate. Its comments follow.

APPENDIX II

Multnomah Foundation for Medical Care

John W. Bussman, M.D. President
Robert L. Hare, M.D. Vice-President
William M. Clark, M.D. Secretary
John D. Johnson, M.D. Treasurer
George H. Casbar, M.D. Member at Large

Philip C. Walker, II
Executive Director

2164 S. W. Park Place Portland, Oregon 97205 (503) 243-1151

February 26, 1979

Mr. Gregory J. Ahart
Director
U.S. General Accounting Office
Human Resources Division
Washington, D.C. 20548

Dear Mr. Ahart:

I have reviewed the draft report which you provided concerning the problem found in evaluating cost effectiveness of PSROs.

Generally, the report is well written and accurate, based on Multnomah Foundation for Medical Care's involvement in the evaluation activity.

I am requesting that two influencing factors, which I believe to be significant, be included in this report.

The first factor is the knowledge of upcoming PSRO or modified utilization review (UR) regulations which all areas of the country were aware of with the passage of P.L. 92-603. Recognizing it is impossible to measure or project what would have happened without P.L. 92-603, the fact that the law was passed did have an influence in modifying utilization review in most hospitals across the country, whether or not a PSRO was active. In many areas late starting PSROs found, when hospitals were contacted, a prototype PSRO review system was in place.

Secondly, might it add to the report to include in the study a comparison of adjusted "savings" by each PSRO to each PSRO's actual expenditures. This may give the reader that small amount of information which often adds to the understanding of the problem.

Thanks for the opportunity to provide input and to review your report.

Sincerely,
MULTNOMAH FOUNDATION FOR MEDICAL CARE

Philip C. Walker, II
Executive Director

cc: Donald R. Baiardo

DESCRIPTION OF ESTIMATES OF SAVINGS FOR THE NEW YORK COUNTY PSRO AND ITS COMMENTS ON OUR REPORT

ESTIMATE FOR 1975-76

The 1975-76 New York County PSRO estimate was presented during testimony before the Subcommittee on Oversight, House Committee on Ways and Means, on April 6, 1977. At that time it was pointed out that the data were complex and that the PSRO had only limited review experience in the hospitals. Because of this, a New York County PSRO official stated that the PSRO did not wish to make a precise finding until further trend analysis could be made and additional experience gained. Although a precise claim was not made, the official did indicate that the data suggested a reduction in patient days of 100 to 200 per month at each of seven hospitals under PSRO review, or an annual savings of between $1.7 and $3.4 million. We selected this estimate for review because it was made during congressional hearings.

When we began our review of this claim, the New York County PSRO sent a letter to one of our staff members with copies to the Chairman, Subcommittee on Oversight, House Committee on Ways and Means; two Subcommittee members; and several HEW officials. The New York County PSRO objected to our review of the 1975-76 study because it was qualified, but then went on to state:

> "I also stated to you that although the data available in early 1977 were incomplete and the time for developing a methodology for precise analysis was too short, the NYCHSRO experience of the subsequent full year supports the prediction rather well. The substantial decline in utilization then anticipated has occurred. In fact, data for these seven hospitals for the calendar year 1977 reveal an overall average decrease per hospital per month of more than 725 federal patient days making our original estimate conservative." (Underlining added.)

In our view, this communication to the Subcommittee was somewhat contradictory in that in one place the PSRO asserts it made no claim about the 1975-76 utilization reduction, and in another asserted that the original estimate was conservative. Accordingly, we decided to validate the data used by the PSRO for both the 1975-76 and 1976-77 periods.

The statement made during the testimony is based on information that indicates that an average of 182.14 days of care were saved each month at each of the seven hospitals at an average per diem rate of $200. The estimate of $1.7 to $3.4 million can be refined as follows: 182.14 days x 7 hospitals x 12 months x $200 = $3,060,000.

To compute their estimated savings, PSRO personnel compared hospital-furnished ALOS data for 1975 to comparable months of 1976 for each hospital and arrived at the changes in ALOS. The changes in ALOS were then multiplied by the estimated number of 1976 Medicare and Medicaid discharges to determine the number of patient days saved. Patient days saved were converted to dollar amounts by multiplying by the average per diem reimbursement rate.

According to an official of the New York County PSRO, the estimate of savings was based only on changes in ALOS rather than on total changes in hospital utilization (changes in ALOS and changes in admission or discharges) because the information on discharges was not available at the time the estimate was prepared. Although changes in discharges were not considered in the PSRO's estimate, the official indicated that, to get a true picture of utilization changes, discharges should be considered.

At the time of our review, the necessary discharge data were available to convert the estimate from an estimate that only considers changes in the ALOS for Medicare and Medicaid patients to an estimate that considers total Medicare and Medicaid changes in hospital utilization. After adjusting the estimate of savings to account for changes in discharges, the revised estimate shows an increase of utilization costs amounting to about $0.8 million rather than a savings of over $3 million.

In addition, we made two adjustments to the data used to compute the estimate of savings and then recomputed the savings using the same methodology used in the original estimate except we also considered changes in discharges. Also, we learned that PSRO personnel made several mathematical errors which resulted in the savings being overstated by about $0.3 million.

The PSRO staff obtained data from the hospitals in early 1977 to compute changes in ALOS from 1975 to 1976. As a part of our review, we obtained more recent and complete data which, when used to recompute the savings, indicated

that the savings estimate reported by PSRO officials was overstated by about $3 million as a result of using improper ALOS figures.

When PSRO officials converted estimated days of care saved to estimated dollars saved, they applied a $200 average per diem rate to all days of care saved. We converted these same days of care saved using actual per diem rates for each hospital and learned that the application of the average rate to all hospitals had caused the estimate of savings to be overstated by about $0.5 million.

A summary of the corrections and adjustments that we made to the New York County PSRO 1975-76 cost savings estimate are shown below.

Original estimate based on changes in ALOS		$ 3,060,000
Less adjustment to account for increases in patient discharges		3,846,824
Revised estimate based on changes in Medicare and Medicaid utilization		(786,824)
Less additional adjustments:		
Effect of updating ALOS data	$3,007,680	
Effect of using actual hospital per diem rates rather than average per diem rates	457,720	
Correction of mathematical errors	309,840	3,775,240
Adjusted estimate of savings		$(4,562,064)

ESTIMATE FOR 1976-77

The New York County PSRO claimed that during 1977, an overall average decrease of Medicare and Medicaid utilization of 725 days of care per month for each of the seven hospitals that were under PSRO review, for a total reduction of 61,000 Federal patient days of care. At the time, the PSRO did not convert these days of care to dollar savings.

The estimate is generally based on 1976 utilization data obtained from Uniform Statistical Reports, which are submitted by the hospitals to the New York Blue Cross as a basis for reimbursement negotiations. However, when the study was made, these data were not available for 1977. As a result, 1977 data were generally obtained directly from the hospitals by the PSRO. Officials at all hospitals included in the study informed us that the best source of utilization data is the Uniform Statistical Reports. We recomputed the savings based on 1976 and 1977 utilization data obtained from those reports and concluded that the New York County PSRO overstated its claimed savings by about 25,000 patient days.

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In commenting on our report, the New York County PSRO stated that it agreed with our recommendation that PSROs should be provided the expertise and assistance necessary to enable them to appropriately collect and utilize data. The New York County PSRO did not take issue with any of the adjustments that we made to its estimate or with the methodology problems that we pointed out about the estimate. It points out, however, that the HCFA Professional Standards Review Organization 1978 Program Evaluation indicates that the New York County PSRO has been effective in reducing Medicare hospital utilization and was ranked second in the Nation in terms of benefit-cost ratios.

We believe that a primary difference between the results of the PSRO estimates of savings as adjusted for corrected data and the HCFA 1978 evaluation is that the PSRO studies involved only seven hospitals, whereas the 1978 HCFA evaluation covered the difference in utilization between 1974 and 1977 for 44 hospitals.

A copy of the New York County PSRO comments follows.

APPENDIX III

New York County Health Services Review Organization

50 West 23rd Street, New York, New York 10010 • 691-4300

March 5, 1979

Mr. Gregory J. Ahart
Director
Human Resources Division
United States General Accounting
Office
Washington, D.C. 20548

Dear Mr. Ahart:

Thank you for providing New York County Health Services Review Organization (NYCHSRO) with the opportunity to review and comment on the General Accounting Office's (GAO's) draft report on statements made by Professional Standards Review Organizations (PSROs) in 1976 regarding their effectiveness and estimated or projected cost savings.

Notwithstanding certain methodological problems identified by the GAO, NYCHSRO's belief that it has been effective in substantially reducing Medicare utilization has been verified and documented in the Health Care Financing Administration (HCFA) Professional Standards Review Organization (PSRO) 1978 Program Evaluation, the results of which are contained in the Department of Health, Education, and Welfare (DHEW) Publication No. HCFA - 03000, January, 1979 ("1978 PSRO Evaluation").

As mentioned in our letters to the Subcommittee on Oversight, NYCHSRO did not wish to be evaluated on the basis of its early estimates since these estimates were limited to data from only seven hospitals. Nevertheless, in spite of the narrow scope of this preliminary study, the NYCHSRO projections turned out to be accurate when all area hospitals and Medicare days of care were included . This finding was corroborated by the 1978 PSRO Evaluation which ranked NYCHSRO second among PSROs across the nation in terms of benefit-cost ratio. The report estimated that $10.69 were saved for every dollar spent by NYCHSRO.

The 1978 PSRO Evaluation, which involved an assessment of Medicare utilization for 1977, documented the following additional findings regarding NYCHSRO:

APPENDIX III

- Of the 96 active PSROs which showed a relative decline in hospital days of care per 1,000 aged Medicare enrollees, NYCHSRO ranked third in the nation with a 6.53% reduction in Medicare days of care per thousand population.

- Regarding Medicare utilization, NYCHSRO ranked second in the nation, with a reduction of 114,785 total Medicare days saved. (See excerpts attached).

We believe these facts clearly support our early good faith projections that NYCHSRO could and would prove to be cost effective. Moreover, because the PSROs were the only agencies actually reviewing Medicare services, no question was raised in the 1978 PSRO Evaluation regarding possible influence of other external review activities.

If any lesson is to be learned from this GAO study, it is that new programs which aspire to effect social change should not be pressured, prematurely, to prove their effectiveness but rather should first be allowed an opportunity to move from the developmental to the full implementation stage. Demands for proof of impact should be deferred until complete and reliable data are available for objective evaluation upon which future social policy formulations may rely.

Finally, we agree with the recommendation of the GAO that the federal government provide the expertise and assistance necessary to enable the PSROs to obtain such data and utilize them appropriately.

Sincerely,

Eleanore Rothenberg

Eleanore Rothenberg, Ph.D.
Executive Director

ER:sc
Att.
cc: Elizabeth A. Goessel, M.D.
Allen H. Postel, M.D.
NYCHSRO Board of Directors
Leonard Schaeffer
Alan Saperstein
Dennis Siebert
Helen L. Smits, M.D.

DESCRIPTION OF ESTIMATE OF SAVINGS

FOR THE WASHINGTON, D.C., PSRO

During a November 7, 1977, news conference, an official of the PSRO for the Washington, D.C., area stated that during 1976 the PSRO had saved $3 million in medical costs. On the following day, The Washington Post reported that this PSRO had saved the U.S. Government $3 million in the past year. We selected this estimate because it was specifically mentioned by the Subcommittee's request. Apparently, the press report did not reflect what the PSRO meant to say because a November 7, 1977, news release and a study prepared by the PSRO indicate that, if Medicare, Medicaid, and other public programs only paid for hospital treatment that was medically necessary, about $2.7 million could have been saved because many patients in Washington, D.C., hospitals do not belong there. According to a PSRO official, the $3 million figure was a rounding up of the $2.7 million estimate of potential savings. There is obviously a big difference between potential savings and actual savings.

To compute the $2.7 million estimate of potential savings, PSRO personnel determined that 759 acute care hospital patients who spent a minimum of 19,015 inappropriate days in Washington, D.C., hospitals were discharged during 1976. The 19,015 inappropriate days included 15,679 days for patients being treated as Medicare, Medicaid, or Maternal and Child Health beneficiaries, and 3,336 days for patients who are not beneficiaries of a Federal program. The latter include local charity patients. The PSRO multiplied the 19,015 inappropriate days of care by a $140 hospital per diem rate to arrive at the $2.7 million of potential savings.

The inappropriate days include denied days, administrative days, and grace days. Denied days are the portion of a patient's stay for which payment was denied because the PSRO determined the patient did not need acute or any other level of medical care. Administrative days are the portion of the patient's stay that was certified for payment by the PSRO even though the patient only needed a lower level of care, such as a skilled nursing home, but none was available. Grace days are those days allowed Medicare patients, who no longer need acute care, to arrange for their discharge care. As the study indicates, these days represent potential savings and many were paid for.

We made five adjustments to the estimate made by the Washington, D.C., PSRO to improve its accuracy and to adjust it so that it only consists of actual savings as stated in the news conference and reported in the press. First, we included the results of data updated after the news conferrence. This added 325 inappropriate days valued at $45,500 to the estimate of potential savings. Second, we reduced the savings by about $1 million to account for the fact that 6,869 of the potential days saved are administrative days and were paid for. Third, we reduced the claim by $337,900 to account for the difference between the statement made by a PSRO official at the news conference and the amount supported by the PSRO's study of estimated potential savings. Fourth, we reduced the savings by $25,620 to account for grace days that were actually paid. Finally, we reduced the estimate by $52,500, because the District of Columbia's Department of Human Resources paid for 375 days that the PSRO had denied for payment. (See p. 11.)

A summary of these adjustments is shown below.

Original estimate made during news conference		$3,000,000
Adjustment for rounding		(337,900)
Potential savings shown in PSRO study		$2,662,100
Additional adjustments:		
Updated data	$(45,500)	
Administrative days paid	961,660	
Grace days paid	25,620	
Denied days paid	52,500	(994,280)
Adjusted estimate of savings (notes a and b)		$ 1,667,820

a/Includes $442,540 savings for other than Federal programs (i.e., local charity cases).

b/Includes $856,800 of savings that we did not verify because it would have required a prohibitive amount of time.

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We gave the Washington, D.C., PSRO an opportunity to comment on our report; however, we did not receive any comments.

APPENDIX V

DESCRIPTION OF ESTIMATE OF SAVINGS FOR THE CHARLES RIVER, MASSACHUSETTS, PSRO AND ITS SUGGESTED DESCRIPTION

In an April 14, 1977, letter to the Chairman, Subcommittee on Health, Committee on Ways and Means, United States House of Representatives, the Charles River, Massachusetts, PSRO executive director stated that PSRO review had reduced Medicaid hospital utilization during the first year of PSRO review, resulting in estimated hospital cost savings of over $3 million. Although this letter attributed the savings to reduced Medicaid utilization, the data supporting the estimate of savings, internal memoranda, and correspondence pertaining to the estimate indicate that the savings were attributable to reductions in both Medicare and Medicaid hospital utilization. We selected this PSRO for review because at the time we received the request from the Subcommittee, we had work underway at this PSRO.

The PSRO estimate was based on a reduction in ALOS multiplied times the number of Medicare and Medicaid admissions during the first year of PSRO review (fiscal year ending September 30, 1976). According to the letter, the Medicaid ALOS declined by 1.3 days during the first year of PSRO review, which resulted in estimated hospital cost savings of about $200 per admission. The difference between ALOS for Medicaid patients during the quarter ended September 30, 1975, according to State Medicaid records, and the ALOS for Medicaid patients for the quarter ended December 31, 1975, was a 1.3-day reduction in ALOS according to PSRO records. The State Medicaid records and the PSRO records only included medically necessary days of care. The State Medicaid records, however, included administrative days of care as medically necessary days, whereas the PSRO records did not include administrative days of care.

During the first year there were 15,625 Medicare and Medicaid admissions reviewed which when multiplied by the estimated reduction of 1.3 hospital days per admission at $200 per admission resulted in estimated savings of $3,125,000.

The estimated savings of $200 per admission was the average per diem cost for 1.3 days of care ($150 per day) at the seven hospitals in the PSRO area, as reported by Medicare and Medicaid officials.

The 15,625 Medicare and Medicaid admissions figure was obtained from PSRO reports which had been submitted quarterly to HEW during 1976. During our review we did not note any problems with respect to these data.

Because 1975 hospital data did not include data concerning medically unnecessary days comparable to 1976 PSRO data, we obtained Medicare and Medicaid hospital utilization data for total days of Medicare/Medicaid care paid, for the fiscal years ending September 30, 1975, and September 30, 1976, and computed the change in ALOS. Our computation showed that the total ALOS decline for Medicare and Medicaid patients was 0.1 day. Applying this reduction to the 15,625 Medicare and Medicaid hospital admissions reviewed by the PSRO in 1976, and using $150 as the actual per diem cost paid for hospital room and board by Medicare and Medicaid (exclusive of ancillary costs), we computed the estimate of savings to be $234,375, rather than $3 million estimated by the PSRO in its letter to the Chairman of the Subcommittee on Health, Committee on Ways and Means, in April 1977.

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In commenting on our report, the Charles River PSRO stated that our description of its estimate of cost savings was misleading and provided a suggested corrected version. The above description is the PSRO's suggested corrected version of its estimate of cost savings with the following changes and corrections:

--We clarified the PSRO's version by indicating that the State Medicaid records included administrative days of care as medically necessary days, whereas the PSRO records did not include administrative days of care.

--In its corrected version, the PSRO stated that the ALOS declined by 1.3 days during the first year of PSRO review. However, when it computed its savings it used a decline of only 1 day in ALOS. To be consistent we used 1.3 days in both cases.

--The PSRO stated that $200 was the amount that was saved on each admission. The PSRO also used $200 as the average per diem rate. By doing this, the PSRO is, on one hand, saying that $200 represents the cost of 1.3 days of care (ALOS decreased by 1.3 days per admission) and on the other hand, $200

represented the average cost of 1 day of care. To be consistent we used $200 as the amount that was saved on each admission or the cost of 1.3 days of care.

--As presented to us, the PSRO's suggested version states that in its letter to the Subcommittee Chairman, it reported that the Medicaid ALOS decline of 1.3 days during the first year of PSRO review "may result in" hospital cost savings of about $200 per admission. However, in its original claim to the Subcommittee Chairman, the PSRO clearly states that the reduction in ALOS has resulted in hospital savings. We corrected this misstatement.

The text of the PSRO version of its estimate of cost savings as presented to us in a letter dated March 7, 1979, follows.

APPENDIX V

DESCRIPTION OF ESTIMATE OF SAVINGS FOR THE CHARLES RIVER, MASSACHUSETTS PSRO

In an April 14, 1977 letter to the Chairman of the Subcommittee on Health, Committee on Ways and Means, United States House of Representatives, the Charles River, Massachusetts, PSRO Executive Director stated that PSRO review had reduced Medicaid/Medicare hospital utilization during the first year of PSRO review, resulting in estimated hospital cost savings of over $3 million. Although this letter inadvertently attributed the savings to reduced Medicaid utilization only, the data supporting the estimate of savings, internal memoranda, and correspondence pertaining to the estimate indicate that the savings were attributable to reductions in both Medicare and Medicaid hospital utilization. We selected this estimate because at the time of the request GAO had been doing routine survey work at this PSRO.

The PSRO estimate was based on a reduction in medically necessary ALOS days multiplied times the number of Medicare and Medicaid admissions during the first year of PSRO review (fiscal year ending September 30, 1976.) According to the letter, the Medicaid ALOS declined by 1.3 days during the first year of PSRO review, which it was estimated, "may result in" hospital cost savings of about $200 per admission. The difference between ALOS for Medicaid patients during the quarter ended September 30, 1975, according to State Medicaid records, and the ALOS for Medicaid patients for the quarter ended December 31, 1975 was a 1.3 day reduction in ALOS according to PSRO records. The State Medicaid records and the PSRO records only included medically necessary days of care.

During the first year there were 15,625 Medicare and Medicaid admissions reviewed which when multipled by the estimated reduction of one hospital day per admission at $200 per admission resulted in estimated savings of $3,125,000.

The estimated savings of $200 per admission was the average per diem operating cost of the seven hospitals in the PSRO area, as reported in their annual financial reports.

The 15,625 Medicaid and Medicaid admissions figure was obtained from PSRO BQA 121 reports which had been submitted quarterly to HEW during 1976. During our review we did not note any problems with respect to this data.

Because 1975 hospital data did not include data concerning medically unnecessary days comparable to 1976 PSRO data, we obtained Medicare and Medicaid hospital utilization data for total days of Medicare/Medicaid care paid, for the fiscal years ending September 30, 1975, and September 30, 1976, and computed the change in ALOS. Our computation showed that the total ALOS decline for Medicare and Medicaid patients was .1 day. Applying this reduction to the 15,625 Medicare and Medicaid hospital admissions reviewed by the PSRO in 1977, and using $150 instead of $200 as the actual per diem cost paid for hospital room and board by Medicare (exclusive of ancillary costs), we computed the estimate of savings to be $234,375. rather than the $3,000,000. estimated by the PSRO in its letter to the Chairman of the Subcommittee on Health, Committee on Ways and Means in April 1977.

APPENDIX VI

DESCRIPTION OF ESTIMATE OF SAVINGS FOR THE WYOMING PSRO AND ITS COMMENTS ON OUR REPORT

The $2.7 million savings claimed by the Wyoming PSRO was reported in an October 5, 1976, HEW report to the Office of Management and Budget. The savings were determined through a comparison of the ALOS in 1974 for Medicare patients with the ALOS in 1975. In addition, the savings included the results of a reduction in the number of Medicare admissions from 1974 to 1975. We selected this estimate of savings because we had to visit this PSRO as a part of our work to determine changes in Medicare hospital utilization as reported in the OPEL study.

The ALOS decreased from 9.15 days in 1974 to 8.17 days in 1975. To calculate the dollar savings as a result of this decrease, the decrease was multiplied by the average cost per Medicare day excluding ancillary charges--$76. This amount of savings per patient was then multiplied by the total Medicare admissions in 1975. The savings resulting from the decrease in admissions were calculated by multiplying the reductions in admissions from 1974 to 1975 by the average cost per day and the Medicare ALOS for 1975. The savings as a result of the decrease in ALOS amounted to $893,760 and the savings in reduced admissions amounted to $1,816,191, for a total savings involving Medicare patients of $2.7 million.

Data supporting the claimed savings were originally obtained by PSRO officials from the SSA in March 1976. However, the data for 1975 would have been incomplete at that time because there is a 12- to 18-month lag in processing Medicare claims. Using more current and complete 1975 Medicare data, we recomputed the savings to be $453,644 rather than $2.7 million as originally claimed.

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The Wyoming PSRO expressed general agreement with the matters discussed in our report. Its comments follow.

wyoming health services Company, Inc. P.O. Drawer 4009 Cheyenne, Wyoming 82001
Phone (307) 635-2424

February 26, 1979

Mr. Gregory Ahart, Director
Human Resources Divison
U. S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Ahart:

The Wyoming PSRO appreciates the opportunity of reviewing and commenting on the proposed report "Professional Standards Review Organizations", prepared by the U.S. General Accounting Office.

In any study of effectiveness of medical care review, it is nearly impossible to pick one criteria by which all aspects of the degree of change can be measured. This is specifically true when the savings are translated into dollars and cents. The Wyoming PSRO--as you stated in your report--has never maintained that the changes in Medicare and Medicaid utilization during the period 1974 to 1976 were solely because of our PSRO's activities. In addition, this inherent weakness in PSRO evaluation is magnified because PSROs do not have the authority nor activity to control all aspects of costs. Federal health care programs regulations stymie many of the savings which could result from PSRO activities. It would appear the Congress did not intend for PSRO to be the total cost saving mechanism in federal health care programs. The Congress specifically limited PSRO activity to the judgement of medical necessity and appropriateness of the setting for care rendered. Also, a great deal of information in the statutes and in regulations issued dwell on improvements in quality of care.

Until PSRO activities are expanded to cover all cost control areas in the health care field, PSROs cannot accurately be judged solely on a cost savings basis. It is highly unlikely this expansion of PSRO activities will ever take place. Therefore, it is of utmost importance that we have realistic expectations in judging a PSRO's effectiveness.

The second problem in evaluating PSROs is the changeability of data. The report points out that the Medicare data on utilization

used by the Wyoming PSRO in March, 1976, for the years 1974 and 1975 was incomplete. In 1978, GAO people used adjusted SSA data for 1975. It is highly probable that should a study be done on 1975 in 1981, the SSA data for 1975 would be further modified from the 1978 information. Constant revision of data makes one-item criteria a very leaky boat in which to set sail.

If PSROs are to be judged on UR alone, a standard methodology for arriving at acceptable performance must be formulated. Thus far, these uniform standards have not been forthcoming.

Specifically, we would like to comment to two points in the report:

> Page 28: It is true that some early discharges can result in readmissions. However, it has been our experience that in a majority of cases where pressure has been brought about through non-certification or consultation with attending physicians that discharge--when no medical necessity existed--did not result in early readmissions. Our data for the past 24 months shows that readmissions within 18 days have decreased.
>
> Page 40: It should also be noted that physician population in Wyoming increased 16.9% from 1974 to 1976. Yet, Wyoming was able to achieve a decrease in utilization.

The Wyoming PSRO believes your report can be a valuable tool in creating a clear picture of PSRO activities and results. Certainly, the GAO report has pointed out the many problems in attempts at evaluating effectiveness during the first three years of PSRO operations in various parts of the country. Again, we appreciate the opportunity of commenting on your report.

Very truly yours,

Robert G. Smith
Executive Director

RGS:mbh

DESCRIPTION OF ESTIMATE OF SAVINGS FOR THE SOUTHEASTERN MASSACHUSETTS PSRO AND ITS COMMENTS ON OUR REPORT

In April 1977 the Southeastern Massachusetts PSRO stated in a press release that its activities had resulted in a $1,012,000 cost reduction for the Massachusetts Medicaid Program. The press release also states that although the data are not as accurate as they are for Medicaid patients, they indicate that a reduction of 6,000 patient days exists for the Medicare program. On May 8, 1977, these savings estimates appeared in an article in the Boston Herald American.

To compute the $1,012,000 Medicaid savings, PSRO officials compared Medicaid data for the last quarter of calendar year 1975 with the last quarter of 1976. The 1975 data were obtained from the State Medicaid agency and included both medically necessary days and administratively necessary days. The 1976 data were obtained from the PSRO's own reports and only included medically necessary days. Medicaid days saved were converted to dollars saved by multiplying the days by the actual per diem rates for the last quarter of 1975. The same per diem rate was used for both years to remove the effects of inflation.

To compute the 6,000 Medicare days saved, PSRO officials compared estimated days of care for the last quarter of calendar year 1975 with PSRO data on days of care for the last quarter of 1976. Days of care for 1975 were computed by obtaining hospital data showing total days of care for Medicare patients for the entire year. These figures were divided by four and the quotient used to represent the number of Medicare patient days for the last quarter. These were then compared to PSRO reports which only show medically necessary Medicare days of care for the last quarter of 1976. We also learned that the PSRO reports used to obtain 1976 data were incomplete, because they did not contain data on patients who did not receive a PSRO review within 24 hours of admission.

We obtained corrected and complete data for Medicare and Medicaid patients for the fourth quarters of calendar years 1975 and 1976. These data show all Medicare and Medicaid days of care that were paid for rather than total days for 1975 and just medically necessary days for 1976. Using

these data and applying the same methodology used in the original estimate, we recomputed the estimated savings and determined Medicaid savings were only $257,428 and Medicare days of care increased by 2,989 days. Thus, the original estimate was overstated by $754,572, and 8,989 days of care, as shown below.

	Estimated savings	
	Medicaid	Medicare
	(dollars)	(days of care)
Original estimate as reported in the Boston Herald American	$1,012,000	6,000
GAO estimate based on corrected and complete data	257,428	(2,989)
Overstatement of savings	$ 754,572	8,989

We did not determine how much of the overstatement was attributable to each of the above discussed deficiencies. We did, however, learn that, when the PSRO computed its estimate of dollar savings for Medicaid patients, it made mathemetical errors that caused the estimate to be overstated by $115,389.

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In the draft report that the PSRO commented on, we showed the savings as the PSRO presented them in its press releases and as they appeared in an article in the Boston Herald American. The article converted the 6,000-day reduction in Medicare hospital utilization into a $600,000 savings using a per diem rate of $100. This resulted in total savings of $1,612,000 rather than a savings of $1,012,000 plus 6,000 days of care as shown in the PSRO's press release. Although we showed and explained both estimates, our analysis was shown as it related to the $1,612,000 estimate. The PSRO objected to this presentation.

We have revised our presentation to meet the PSRO's concerns. The text of the PSRO's comments follow.

APPENDIX VII

SEMPRO

SOUTHEASTERN MASSACHUSETTS PROFESSIONAL STANDARDS REVIEW ORGANIZATION, INC.

Paul R. Egan
Executive Director

March 5, 1979

Mr. Gregory J. Ahart, Director
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Ahart:

Please be advised that your Draft Report concerning the PSRO program evaluation is just not accurate regarding this corporation.

Your draft reports SEMPRO estimating health care savings of $1,612,000. This is a combination of the newspaper writer's extrapolation of 6,000 Medicare days of care at $100 per day plus $1,012,000 of stated savings to the Medicaid program expressed in constant 1975 dollars. The actual dollar savings for Medicaid after inflation is stated as $707,000.

You should note from our press release that our analysis of the Medicare impact states clearly that the data is soft. We, therefore, used it only to suggest a positive trend. Most importantly, we did not attach a dollar value to these days of care. The newspaper writer did. Your field author said that since I did not write a letter to the editor protesting such extrapolation, I was concurring with its accuracy. I leave that comment for you to evaluate.

This leaves us with estimated savings of $707,000 for the Medicaid program only. Your statement to the Committee on Oversight (dated June 15, 1978, page 6) suggests we overstated our estimate by "about $500,000" for days of care which were paid for even though we did not certify them as medically necessary. This first off, I presume, leaves us with verified savings of $207,000. Secondly, and most importantly, it highlights a very serious flaw in the Medicaid program that Congress should deal with. This is, the inconsistency between the intent of the PSRO law and the reimbursement rules and regulations. Following your investigation, it is quite clear to us now that "about $500,000" for the calendar quarter in question was a potential savings. A substantial portion could be achieved but it is beyond the control of the PSRO program. It is up to Congress and HEW to fully optimize the potential of our efforts.

Very truly yours,

Paul R. Egan
Executive Director

PRE:mp

Enc.

Box 676 / 91 South Main Street / Middleboro, Massachusetts 02346 / (617) 947-4359

APPENDIX VIII

DESCRIPTION OF ESTIMATE OF SAVINGS FOR THE SAN JOAQUIN, CALIFORNIA, PSRO AND ITS COMMENTS ON OUR REPORT

In a letter dated March 3, 1978, the executive director of the San Joaquin area PSRO requested that his PSRO be included in the phase of our review dealing with cost savings estimates. The letter states a recent study of the PSRO's patient care service program shows a 5 to 1 direct cost savings ratio. The letter does not state the total amount of estimated savings. Copies of this letter were sent to various officials responsible for administering the PSRO program.

The study referred to in the executive director's letter reports annual estimated savings of about $1.2 million. The savings is the result of interventions by the PSRO's review system for Medicare and Medicaid patients. The PSRO identified four events that it believes have an impact on hospital utilization:

--Request for information from the attending physician for the PSRO nurse to determine what level of care the patient needs, i.e., acute hospital care, medical care in a nursing home, or no medical care.

--Notification to the attending physician that a level of care determination of less than acute hospital care will be made within 24 hours unless additional information supporting the need for acute care is provided.

--Notification to the attending physician that a formal determination has been made that the patient's level of care is less than acute, but that continued stay at the acute hospital is necessary because no feasible alternate facilities are available.

--Notification to the attending physician that a formal determination has been made that the patient's level of care is less than acute and continued stay at the acute hospital will not be certified as necessary by the PSRO.

Based on the opinion of its nurses, the PSRO determined the average number of days saved each time one of the above events occurred. This was done by having 6 of its nurses

record for a 10-day period (1) the number of times each of these events occur and (2) their estimate of the number of days that are saved as the result of each event. The nurses did not record information to identify the patient, attending physician, hospital, date, etc. The data collected was used to determine the average number of days saved for each of the above events. The averages, which ranged from 2.3 days to 4.5 days, were used to determine the total number of days saved. The number of days saved were converted to dollar savings by multiplying them by the average cost of a hospital day in California and deducting the PSRO's cost of performing utilization review.

We were unable to validate the claim of estimated savings because the basis for the savings is the PSRO nurses' estimates of the number of days that were saved as the result of various events in the PSRO review process. In our opinion, these estimates are subjective. In addition, records were not maintained that would allow us to determine the subsequent disposition of the patients upon which these estimates are based. For example, if a PSRO nurse determined that 5 days were saved because the attending physician was notified that the patient no longer needed acute hospital care, we could not find out if they were discharged of if the attending physician successfully appealed the determination.

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The PSRO's written comments are on pages 57 and 58 of this report. The PSRO stated that (1) it provided us with records supporting the determinations that its nurses made with respect to the impact of their interventions and (2) we could have used an independent physician consultant to pursue the validation of this data.

We did attempt to reconcile on a test basis the individual records provided to us on cases reported by the PSRO nurses. This test was for two nurses who reported 31 percent of the intervention events. These nurses reported that during the 10-day test period they issued 21 requests for information from attending physicians and 29 notifications to attending physicians. However, our review of the records provided by the PSRO shows 23 requests for information from the attending physicians and 19 notifications. The PSRO officials could not explain these differences. Therefore, it did not appear to us that these records were the same records that were used as the basis for the savings estimate.

Moreover, we question how accurately an independent physician consultant can estimate the impact of such events as how much earlier did the attending physician discharge a patient because the PSRO nurse requested information to make a level-of-care determination. The PSRO nurses' estimates of the impact of these requests is the basis for 62 percent of its estimate of savings. In our opinion, such estimates are subjective estimates regardless of whether they are made by a PSRO nurse or by an independent physician consultant.

This PSRO also pointed out that the data for the 1977 OPEL evaluation discussed on pages 19 through 23 included statistics on one hospital in its area which was closed in 1974. We have not classified this hospital as one which was inappropriately included because (1) it was in operation during the baseline period of the OPEL study and (2) officials at other area hospitals had told us that the closed hospital's patient load was absorbed by other hospitals in the PSRO area. Other comments by this PSRO have been incorporated in the report.

SAN JOAQUIN AREA PROFESSIONAL STANDARDS REVIEW ORGANIZATION
555 W. Benjamin Holt Drive, Suite 421 • P. O. Box 1972 • Stockton, CA 95201 • (209) 951-6711

February 26, 1979

Mr. Gregory J. Ahart
Director
Human Resources Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Ahart:

As requested in your letter of February 13, 1979, SJPSRO is submitting comments on the draft proposed report on problems in evaluating the cost effectiveness of PSROs.

Our most basic comment is that it does not appear accurate to include the cost effectiveness study of San Joaquin Area PSRO (SJPSRO) under a chapter heading which classifies it as an "invalid" estimate. The General Accounting Office (GAO) study did not indicate SJPSRO's estimate to be invalid; but rather stated that the GAO study neither validated nor invalidated the estimate. Furthermore, it is not accurate to state that the SJPSRO study is "not susceptable to verification", but only that the GAO's review did not include all of the steps which would have been necessary in order to verify SJPSRO's estimates. Even though SJPSRO's study was not designed to include patient identifiers, a majority of the records were able to be retrieved based on reviewer and hospital identification, and these were made available to GAO. The next step in following the study's inference sequence would have been to use an independent physician consultant. This step was suggested to GAO by SJPSRO, but the GAO team chose not to pursue the validation attempt to this extent.

A second comment involves the draft report's references to SJPSRO's study as "subjective" or relying on "opinion". While it is true that the methodology was based on estimates of effects of individual review interventions, it should be noted that 1) these estimates were based on factual data (e.g., actual change in planned hospital discharge date due to SJPSRO intervention), and 2) the individual estimates were subjected to validation techniques (e.g., concurrent validation among results of all study participants) and reliability checks as part of the study's methodology.

The draft report portrays SJPSRO's study as based on nurse intervention. It is more accurate to state this as the review system's intervention,

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since the nurse is only one component in the system which was studied. Also included is peer review when needed, and phycician advisor supervision of the nurse coordinators.

Finally, in GAO's study of Medicare utilization changes based on SSA data, we had pointed out that the SJPSRO area has 13 acute hospitals instead of 14, and that one hospital (closed in 1974) was inappropriately included in these statistics.

We appreciate the opportunity to review and comment on the draft report

Sincerely,

D P Sheehy

Daniel P. Sheehy
Executive Director

DPS:aw

DESCRIPTION OF ESTIMATE OF SAVINGS

FOR THE SACRAMENTO, CALIFORNIA, PSRO

HEW's Office of Research and Statistics, SSA, made a cost study of the Certified Hospital Admission Program. The program was a prospective hospital utilization review program which determined the medical necessity for hospitalization and appropriate length-of-stay for Medicare patients. This program represented one of the earliest applications of concurrent review by a prototype PSRO. The final study results, published in the March 17, 1978, issue of HEW's "Health Insurance Statistics," showed that a net savings of $103,081 was attributable to the impact of the Certified Hospital Admission Program. Although the results were not published until March 1978, preliminary results were generally available much earlier. We selected this estimate because it was specifically mentioned in the Subcommittee's request.

To compute the $103,081 savings, SSA compared Medicare hospital utilization statistics for the 12 months ended September 30, 1972--before the start of the program--to the 12 months ended September 30, 1973. This comparison was made separately for hospitals being reviewed under the program and for other hospitals in the northern California area. As a result of this comparison, it was determined that the program saved 15,795 patient days of acute hospital care in Sacramento area hospitals.

The dollar savings were calculated by multiplying the estimated days saved (15,795) by the value of a day saved ($24.19). The value of a day saved represents the average per diem charged by the hospital adjusted to reflect the fact that only an estimated 40 percent of the charge is variable. The remaining costs are fixed and are incurred whether or not the hospital bed is occupied. This results in gross savings of $382,081, from which direct program costs of $279,000 are deducted, resulting in net savings of $103,081. The study indicates that there is a potential to save the full value of an average day saved if in the long run the reductions in utilization lead to reductions in available beds and/or reorganization of hospital resources.

A limitation, pointed out in the study, is the fact that records on the use of alternate services, for example, skilled nursing facilities by patients covered by the study, were not available. Therefore, no adjustment could be made to account for these additional costs.

We made one adjustment to the HEW estimate of savings. On July 1, 1973, one of the hospitals in the Sacramento area changed ownership and Medicare provider number. Because of a design deficiency, the study stopped accumulating patient data for this hospital when its provider number was changed--the new provider number did not get into the system. Thus, 3 months of patient data were not included in the statistics for patients receiving PSRO-type review at this hospital. According to an agency official, this caused the number of patient days saved to be overstated by 2,305 days and the dollars saved to be overstated by $55,758 resulting in an adjusted savings of $47,323.

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HEW did not address this estimate of cost savings in its comments.

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20201

MAR 29 1979

Mr. Gregory J. Ahart
Director, Human Resources
Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Ahart:

The Secretary asked that I respond to your request for our comments on your draft report entitled, "Problems With Evaluating the Cost Effectiveness of Professional Standards Review Organizations." The enclosed comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

We appreciate the opportunity to comment on this draft report before its publication.

Sincerely yours,

Thomas D. Morris
Inspector General

Enclosure

APPENDIX X

STATEMENT OF DEPARTMENT ACTION

Comments of the Department of Health, Education, and Welfare on the General Accounting Office's draft report entitled: "Problems with Evaluating Cost Effectiveness of Professional Standards Review Organizations".

General Comments

GAO examined the cost savings estimates from nine Professional Standards Review Organizations (PSRO'S) and concluded that the estimates were overstated by $17.7 million plus 24,934 patient days that were not costed out. GAO further indicated that the remaining savings claimed by the PSRO's ($4.3 million and 36,115 days) were questionable because of methodological problems in the approaches used by the PSRO's.

GAO also examined data from the 1977 evaluation of the PSRO program in order to determine reasons for changes in hospital utilization. GAO found that for the five PSRO's examined, data had been included for 20 hospitals which should not have been included and omitted for three hospitals that should have been included.

Cost Savings Estimates

It should be recognized from the outset that the determination of PSRO savings as a result of reductions in utilization is a very complex undertaking. Combined with this is the problem of having a current and accurate data base upon which to develop savings estimates. The fact that individual PSRO's did not always do a good job in making estimates is not surprising, given the complexity of the task involved.

It is our view that the best mechanism for determining utilization savings from PSRO activities is through a national evaluation of the program. A national evaluation, which can include disaggregate analysis of the impact of individual PSRO's as did the 1978 PSRO Evaluation, has several advantages:

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- greater resources are available to develop statistically valid methodologies to measure utilization changes;

- validation can be performed on the national data base to insure consistency and quality of data;

- needed adjustments can be made to a national data base that would be impossible to do if only data from a single PSRO were examined. An example of this is the migration adjustment performed in the 1978 evaluation which adjusted the rate data for migration of Medicare patients to another PSRO area for hospital care. Additionally, adjustments for shortfalls of data can only properly be done on a national data set;

- a more consistent approach to the valuation of the cost of a day saved can be done using national data.

The performance of a national evaluation does not mean that individual PSRO's do not have a role in examining their utilization impact. Departmental initiatives will require that PSRO's use the results of the evaluation as a guide to their relative effectiveness, and set objectives to address needed changes in their review programs. In this regard, PSRO's will also reflect the "micro" benefits not shown on a full scale evaluation, such as reduction of days in specific hospitals, reduction in overused procedures, closing of hospitals, imposition of sanctions, and genuine changes in quality of care. However, gross changes in utilization and estimates of savings from utilization reductions can best be done on a national scale.

The GAO report is useful in that it points up the problems individual PSRO's have in attempting to develop savings estimates by themselves.

In all fairness to the PSRO's included in the study, however, it should be noted that most of the adjustments made by GAO in the savings estimates were the result of more current data that was not available when the PSRO's made their estimates. The PSRO's had used the most current data available to them at the time the estimates were made.

APPENDIX X

GAO also made adjustments to correct savings estimates that included days that were denied by the PSRO but were still paid by Medicare and Medicaid as administratively necessary days or grace days. While it is not correct for PSRO's to claim these days as actual savings, they do represent potential savings from PSRO review if alternative care had been available. We believe that GAO, rather than criticize these PSRO's, should have pointed out that these PSRO's were essentially performing their required functions and do not have control over the availability of alternative care facilities.

Finally, it should be kept in mind that the GAO study in no way measures the actual effectiveness of the PSRO's studied. What GAO has identified is problems in measuring effectiveness of PSRO's and not whether the PSRO's themselves are or are not effective. We believe that the problems identified by GAO are eliminated when PSRO effectiveness is measured through a national evaluation of the program.

1977 Evaluation Data

GAO noted that there were problems with the data used in the 1977 study. The two cited problems were:

1. use of inappropriate hospitals in the Medicare data; and

2. use of inappropriate eligibility data.

While we do not dispute the findings of GAO that inappropriate hospitals were included in the Medicare data, it should be noted that, even after the GAO adjustments for these discrepancies, results of four of the five PSRO areas studied were essentially unchanged. Thus, we do not believe these discrepancies invalidate the evaluation study.

With respect to the use of inappropriate eligibility data (migration), we have corrected for this problem in the 1978 evaluation. We did go back and rerun the 1977 evaluation data using the adjustments for migration and found that the adjustments did not change the results of the 1977 study.

Reason for Changes In Hospital Utilization

GAO attempted to determine the causes for changes in utilization in five PSRO's that were part of the 1977 evaluation. We were most disappointed in this part of the GAO study. Rather than attempt to determine the causes of utilization changes as they related to PSRO review activities, GAO simply listed factors that may have contributed to utilization changes, of which PSRO review was one. We would note, however, that GAO

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substantiated the findings of the 1977 evaluation that PSRO review was a factor in the reduction in utilization in two of the five PSRO's GAO studied, and the 1978 evaluation corroborated these findings.

Technical Comments

The GAO report makes reference to the "Social Security Administration" data used by PSRO's to make savings estimates and by OPEL in the 1977 Evaluation. It should be clarified that this is Medicare data that is now collected by the Health Care Financing Administration.

GAO Recommendation

That the Secretary of HEW direct the Administrator of the Health Care Financing Administration to:

- provide technical assistance to help PSRO's prepare the assessments (of savings), particularly in the area of validating the data to be used; and

- develop standard methodologies that can be used by the PSRO's to measure their effectiveness in reducing hospital utilization.

Department Comments

We concur in part.

We have already provided PSRO's with considerable information to assist them in analyzing their particular utilization problems.

- data on Medicare lengths of stay, admission rates, and days of care rates were provided to PSRO's in April, 1978 and October, 1978. The October data were for 1977 and were adjusted for patient migration.

- Technical assistance conferences for PSRO's were held in September, 1978 to assist PSRO's in profile analysis. Profile analysis involves the PSRO using its own data to identify particular utilization and quality problems in its area.

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- Technical assistance conferences for PSRO's were held in October and November 1978, in objective setting. The objective setting process requires PSRO's to set specific impact objectives to deal with utilization and quality problems. The process requires PSRO's to evaluate the results of its review activities to determine whether its impact objectives are achieved.

- We have an ongoing contract to develop refinements to the profile analysis process. Information from this contract will be useful to PSRO's in examining their own data.

- We are in the process of soliciting a contract to assist PSRO's in setting and implementing objectives and documenting their impact. Efforts to assist PSRO's in documentation will concentrate on issues of accuracy in data usage and display, and consideration of possible variables that might be relevant in assessing a PSRO's claim of impact. PSRO's are being encouraged to express this impact in terms of days saved rather than dollars saved, since the dollar savings estimate is more difficult to evaluate and potentially more controversial.

- We have included funds in the contracts of PSRO's to allow them to obtain consultation and assistance in measuring their impact.

As far as a standard methodology to measure effectiveness is concerned, we believe that the methodology used in the 1978 Evaluation is the most appropriate. As indicated earlier, the complexity of this approach does not lend itself to use by individual PSRO's. We believe that PSRO's can best measure their own effectiveness by evaluating the impact of the specific objectives they have set as part of the objective setting process. These will vary from PSRO to PSRO. We have stressed to the PSRO's the need for objectives that are in fact measurable and can be supported by valid data. As indicated, we have also told PSRO's that estimates of dollar savings should not be attempted, since we do not believe they have the capability to develop accurate estimates of the cost of a hospital day saved.

GAO Recommendation

That the Secretary require an extensive validation of Social Security data, including site visits, to assure that it is complete and accurate before it is used to evaluate PSRO effectiveness.

Department Comments

We do not concur.

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First, we believe that most of the concerns raised by GAO concerning validity of the Medicare data have been corrected in the use of the data in the 1978 PSRO Evaluation. The data now includes the appropriate hospitals and has been adjusted for migration.

Second, we are continuing to validate the Medicare data on an ongoing basis through the use of independent data collected from PSRO's.

Finally, we do not agree that site visits are necessary. It is unclear whether GAO is recommending site visits to hospitals, PSRO's or intermediaries. In any case, site visits would be very expensive to conduct and in our opinion, would not significantly improve the validity of the Medicare data.

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