

THE IMPACT OF PSROs ON HEALTH-CARE COSTS:

Update of CBO's 1979 Evaluation

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PREFACE

At the request of the Subcommittee on Oversight of the House Committee on Ways and Means, the Congressional Budget Office prepared this staff working paper updating the June 1979 CBO evaluation of the Professional Standards Review Organizations (PSROs). This analysis parallels the earlier evaluation in focusing on the PSRO program's effects on Medicare hospital utilization and costs. In keeping with CBO's mandate to provide objective analysis, this study offers no recommendations.

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SUMMARY

The rapid increase in federal expenditures for health care since the enactment of Medicare and Medicaid in the mid-1960s has engendered Congressional concern about the costs and quality of these programs. The Professional Standards Review Organization (PSRO) program, established in 1972, is one attempt to meet these concerns through peer review of health services financed under the Social Security Act. Although this program's goals include both restraining the use and ensuring the quality of health-care services, in practice it has placed greater emphasis on the control of utilization--in particular, the control of inpatient use of short-stay hospitals.

The analysis in this paper updates the June 1979 Congressional Budget Office (CBO) evaluation of the PSROs as a means of controlling hospital utilization and attendant health-care costs.¹ The former report covered the program's impact in 1977; this report analyzes 1978 data, the most recent available. Consistent with the 1979 CBO evaluation, this paper considers neither the costs nor the benefits of the quality-assurance portion of the PSRO program.

The 1978 data indicate that the PSRO program's utilization and cost-control efforts have met with mixed success:

- o PSRO review does reduce Medicare days of hospitalization, but there is no good information concerning the program's effect on Medicaid hospitalization.
- o PSRO review has reduced Medicare outlays, but the federal government saves little more than the cost of the review itself.
- o PSRO review of Medicare patients reduces Medicare outlays in part by transferring costs to private patients,

1. Congressional Budget Office, The Effects of PSROs on Health Care Costs: Current Findings and Future Evaluations, June 1979. The Executive Summary of that report is appended to this report as Appendix A.

whose charges will rise accordingly. When the increased costs to private patients are taken into account, PSRO review saves society as a whole substantially less than it costs.

DOES PSRO REVIEW REDUCE USE OF INPATIENT HOSPITAL CARE?

The 1978 data suggest that a PSRO program in which all Medicare hospital patients are reviewed would reduce Medicare days of hospitalization by about 1.5 percent.² The effect of the current "focused" system, in which only a fraction of cases are reviewed, is probably less, but there are as yet no data indicating how much less.

The evidence that PSROs reduce Medicare utilization, however, is not firm. Considering the nation as a whole, the program's apparent effect is sufficiently small and variable that it could be an artifact of chance variation in the data. Moreover, in the South, PSRO review seems to increase utilization, a pattern that is difficult to explain and throws all the results into some doubt.

PSROs affect utilization by Medicare patients primarily by shortening hospital stays rather than by preventing admissions. Of the days of care saved in 1978, roughly 90 percent can be attributed to shortened lengths of stay. Since the first days of hospitalization are usually more expensive than subsequent days, this effect does not reduce costs as much as would a comparable change in utilization by means of admission denials.

There are still no data with which to assess reliably the program's effect on Medicaid patients. Differences in the characteristics of the Medicare and Medicaid populations, however, suggest that PSROs are likely to have less impact on Medicaid utilization.

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2. The difference between this figure and the comparable figure (2 percent) in the earlier CBO report reflects refinements in the estimating procedure rather than a decline in PSRO performance. The same is true of the savings-to-cost ratios presented below. Had the 1977 data been analyzed with this year's methods, the results would have been similar to those presented here.

HAS PSRO PERFORMANCE IMPROVED?

The earlier CBO report noted that, as of 1977, there was no evidence that PSROs become more effective in reducing utilization as they gain experience, and the more recent data confirm that finding. The program's performance did not improve appreciably between 1977 and 1978, even though the average duration of the program in active PSRO areas increased from 16 to 25 months during that interval.

DO PSROs SAVE MONEY?

Total Resource Savings. Although PSROs appear to reduce Medicare utilization, the program consumes more resources than it saves society as a whole. The 1978 data indicate that, for every dollar spent on PSRO review of Medicare patients, only \$.40 in resources were recouped, for a net loss of \$.60.³ This corresponds to a savings-to-cost ratio of 0.4-to-1.⁴ Because PSROs are a part of the health-care system, this finding indicates that, by channeling resources into the PSRO program, society increases slightly its total expenditures for health care.

Since PSRO review replaces earlier forms of utilization review, however, it is not always appropriate to compare the savings generated by PSROs to the full cost of PSRO review. When evaluating the impact of the entire PSRO review system--rather than the effects of marginal changes in PSRO funding and activity--it is appropriate to subtract from PSRO costs the cost of the earlier utilization review that it superseded. This is called the "incremental cost" of PSRO review.

Since the incremental cost of the program is substantially smaller than its total cost, considering only incremental costs casts the program in a more favorable light. The 1978 data indicate that resource savings from PSRO review are only 20

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3. In all instances, only the portion of the PSRO program's costs that can be allocated to its utilization-reduction activities were considered.
 4. All savings-to-cost ratios presented here assume both the costs and the benefits of reviewing all Medicare admissions. The effect on these ratios of the change to focused review is unknown.

percent less than the program's incremental cost, corresponding to a savings-to-cost ratio of 0.8-to-1 (whereas resource savings are, as noted, 60 percent less than the program's total cost).

DO PSROs REDUCE FEDERAL OUTLAYS?

Budgetary Savings. Although the PSRO program results in a loss in societal resources, it has little impact on federal outlays. PSRO review--and any other review system that succeeds in lowering Medicare utilization--affects federal reimbursement payments in two ways: by changing total resource expenditures for health care, and by transferring fixed costs to the private sector. This paper uses the term "reimbursement savings" to refer to the federal reimbursement change stemming from both of these factors. Subtracting program costs from reimbursement savings yields the program's net impact on federal outlays.

The 1978 data indicate that each dollar spent on review yields about 90 cents in reimbursement savings, corresponding to a savings-to-cost ratio of roughly 0.9-to-1.⁵ The net budgetary impact is accordingly a \$.10 loss for every dollar in total program expenditures.⁶

When only the incremental cost of the program is considered, however, PSRO review produces a small net budgetary savings. Reimbursement savings from Medicare review exceed the incremental cost of those activities by about 20 percent, a savings-to-cost ratio of 1.2-to-1.

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5. This ratio of 0.9-to-1 corresponds to the benefit-cost ratio of 1.269-to-1 in the most recent evaluation of the program by the Health Care Financing Administration (HCFA) in that both figures estimate the ratio of reimbursement savings to total program costs. HCFA, 1979 PSRO Program Evaluation (1980).
 6. This figure, like the estimate above of the program's impact on total resources spent for health care, considers only the Medicare portion of the program. If Medicaid review were included--and if it were assumed that PSROs are equally effective with Medicaid and Medicare utilization--this ratio would drop to 0.75-to-1. This is because some of the Medicaid reimbursement savings would go to states rather than to the federal government.

Three general conclusions can be drawn from this array of savings-to-cost estimates:

- o The net budgetary savings from PSRO Medicare review (considering only the program's incremental cost) is small, amounting to less than one-tenth of one percent of Medicare hospital insurance (Part A) outlays.
- o The net budgetary savings from PSRO review (reimbursement savings-to-incremental cost ratio of 1.2-to-1) contrasts with a roughly equivalent net increase in the resources consumed for health care by society as a whole (resource savings-to-incremental cost ratio of 0.8-to-1).
- o This discrepancy between budgetary and societal effects stems from the fact that roughly half of the gross reimbursement savings from PSRO review consist of fixed costs that are transferred to private patients.

WHAT QUESTIONS REMAIN UNANSWERED?

Although the overall PSRO impact on Medicare hospital use is assessed in this report, many questions about the program's effects remain unanswered, including the following:

Do PSRO Utilization Control Activities Have Hidden Costs and Benefits? The activities PSROs conduct to control utilization and costs may have a wide variety of costs and benefits not reflected in the savings-to-cost estimates presented in this paper. For example, although these activities are largely distinct from PSROs' quality-assurance activities, they undoubtedly have both positive and negative effects on quality of care in some instances. They may provide psychological benefits to patients who are eager to leave the hospital, but generate severe stress for families ill-equipped to provide home care for the chronically infirm. Since information on such additional costs and benefits is lacking, any evaluation of the program can only provide an incomplete and perhaps misleading view of the program's impact.

As a first step toward assessing these as yet hidden effects, it is important to collect representative information on the health status of patients whose hospital stays are denied or shortened by PSROs, their subsequent care, and so forth.

Are PSRO More Effective with Certain Types of Patients? The existing research clarifies the average effect of PSRO review on hospital use by Medicare patients, but little is known about PSRO's relative effectiveness with other types of patients. The most important of other patient groups to investigate further is Medicaid patients, since PSRO review of their hospital use is mandated by law and consumes a sizeable portion of the PSRO budget.

It is also important to investigate which types of patients within the Medicare and Medicaid patient populations are most affected by review. Is the impact of the program greatest, for example, among the chronically ill, or among those who are receiving relatively minor surgery? Answers to such questions would permit a more efficient allocation of PSRO resources.

How Do PSROs Vary in Operation, and Are Some Methods More Effective than Others? Surprisingly little information is available about variations in PSRO procedures. Little is known, for example, about the various criteria PSROs use in focusing review. The absence of information about current review procedures and their relative effectiveness retards improvement of the program.

CHAPTER I. PSROs AND THE CONTROL OF MEDICAL-CARE USE

Since the enactment of Medicare and Medicaid in the mid-1960s, federal expenditures for personal health care have grown rapidly, from \$3.8 billion in 1965 to \$53.3 billion in 1979. The Congress has frequently expressed concern about both the costs of federally financed health benefits and the quality of services being purchased.¹

The Professional Standards Review Organization (PSRO) program, established by the Social Security Amendments of 1972,² is one of several legislative efforts to meet these concerns. The PSRO program is a type of peer review intended to "promote the effective, efficient, and economical delivery of health care services of proper quality for which payment may be made under the [Social Security] Act." These payments are principally for Medicare and Medicaid beneficiaries. "Proper quality" services are defined as those that meet the following criteria:

- o They conform to appropriate professional standards;
- o They are provided only when deemed medically necessary;
- o They are provided in the most economical but nonetheless appropriate setting--for example, on an ambulatory rather than an inpatient basis, if appropriate.

Although the PSRO program has a broad range of goals--that is, controlling both the use and the quality of diverse health-care services--it has in practice emphasized primarily the control of inpatient use of short-stay hospitals. Activities designed to restrain hospitalization were implemented most rapidly³ and still

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1. See, for example, Medicare and Medicaid: Problems, Issues, and Alternatives, prepared by the staff of the Senate Committee on Finance, 91:1 (1969).
 2. Public Law 92-603.
 3. Health Care Financing Administration, Professional Standards Review Organization 1979 Program Evaluation, p. 108.

consume over two-thirds of the program's budget (the balance going to support quality-assurance activities and review of other types of health care).⁴

In June, 1979, the Congressional Budget Office (CBO) evaluated the PSRO program as a means of controlling hospital utilization and associated health-care costs.⁵ At that time, the most recent available data covered the program's impact in 1977.⁶ Since the publication of the 1979 evaluation, more recent data have become available permitting assessments of the program's effects in 1978. The analyses reported in this paper use the 1978 data and employ somewhat more refined estimating techniques.

This analysis, like the earlier CBO report, focuses entirely on the utilization- and cost-control aspects of the program. PSRO effects on quality are not considered, nor are the costs associated with quality-assurance activities. The quality-assurance and utilization-control components of the program are largely distinct, and the success of one need not depend on the success--or

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4. Budget of the U.S. Government for Fiscal Year 1981, March 1980 revision.
 5. Congressional Budget Office, The Effect of PSROs on Health Care Costs: Current Findings and Future Evaluations (June, 1979).
 6. The basic findings of the earlier CBO evaluation were that:
 - o PSRO review reduced Medicare hospital utilization by 2 percent;
 - o There were no reliable data concerning the program's effects on Medicaid use;
 - o PSRO review transferred costs to private patients, raising the cost of their care;
 - o Considering the increased costs to private patients as well as savings to Medicare, the total savings generated by PSRO review of Medicare patients were about 30 percent less than the cost of the review itself.

(See Appendix A for a summary of the earlier CBO report.)

even the presence--of the other. This makes it feasible and useful to evaluate the two components separately.

The basic questions considered in this paper, then, are two: do PSROs reduce inpatient hospital care, and do they save money?

PLAN OF THE PAPER

The remainder of this chapter is devoted to background information on PSROs. It outlines why regulating medical-care practice may be desirable, and it describes those regulatory policies that preceded PSROs and those that continue to the present. The chapter also sketches the organization of the PSRO program.

Chapter II analyzes the PSRO program's effects on Medicare hospital use and costs. The savings from PSRO-induced changes in Medicare hospital use are compared with the cost of running the program. The program's net impact on the federal budget is assessed, as is its effect on health-care spending by society as a whole. Chapter III discusses policy issues and questions for future research that are raised by the evaluation results.

MEDICAL-CARE REVIEW AND THE NEED FOR REGULATION

The U.S. medical-care system is currently subject to various types of regulation. These include controls on prices (hospital rate setting, fee schedules for reimbursement of physicians), constraints on the construction of new facilities and the introduction of new services (health planning activities), standards of competence for the practitioners and providers of health-care services (licensing, accreditation), and limitations on the ways medical care is given. The PSRO program, which is an example of the last type of regulation, is designed to regulate the provision of medical care to most beneficiaries of federal programs that finance health services.

The regulation of medical-care practice is intended to alter the array of medical services delivered to patients. Given a standard of desirable care, an existing practice may be deemed inappropriate for one or more of the following five reasons:

1. Additional services could significantly improve the patient's prognosis;

2. A different course of treatment could improve the prognosis;
3. Some services are deemed "unnecessary" because they offer little if any improvement in prognosis;
4. Some services actually risk harming the patient while offering little medical benefit; and
5. Services delivered in a lower-cost setting (such as in a nursing facility or at home) could be as effective as those delivered in a hospital.

Regulation has the potential of containing costs if conditions 3, 4, or 5 exist, and sometimes if conditions 1 or 2 exist. It has the potential of improving quality if conditions 1, 2 or 4 exist.

Inappropriate medical care may exist in an unregulated system for a number of reasons. Because patients usually lack the expertise to discern whether care is unnecessary and/or of poor quality, they depend on physicians to act as advisors in the purchase of medical services. Furthermore, convention among physicians discourages doctors from assisting patients in judging other doctors' work. Thus, physicians are responsible for the appropriateness of their own services. A number of factors, however, impede their carrying out this responsibility.

Medical information diffuses slowly and unevenly. As a result, some techniques are used too long and others are not used soon enough. Physicians may be too busy to keep up with new developments. Furthermore, much of the information that is most readily available to them is oriented toward promoting certain types of new techniques--for example, use of new drugs.

Financial incentives encourage the delivery of unnecessary services. Under the fee-for-service mode of payment, the physician usually gains financially from providing more services. In addition, patients' health insurance lessens their reluctance to use more services because of considerations of cost, and similarly, it lessens physicians' incentives to choose the most economical setting for treatment.

Unnecessary services may also be induced by physicians' fears of malpractice claims. With patients well insured and technically ignorant, physicians are free to practice "defensive medicine,"

which involves--among other things--more diagnostic testing than is called for by best medical judgment.

A common response to problems of inappropriate care is to review the course of treatment prescribed by physicians. This method of regulating medical practice is usually called "utilization review" because it monitors patients' use of medical care. Utilization review activities vary widely in terms of the following characteristics:

- o Who does the reviewing?
- o At what stage of treatment is the review conducted?
- o What decisions about health-care use does the review focus on?
- o What is the extent and direction of "focusing"--that is, to what degree is review focused on specific diagnoses, providers of care, or treatments?
- o If inappropriate care is found, what sanctions are applied?

The choice of the reviewer usually is between review by peers or by a third-party payer (usually an insurance company). Under peer review, a group of local physicians is ultimately responsible for review decisions. When review is conducted by a third party, it is that organization, whether governmental or private, that makes the ultimate decisions. The decision of whether or not to use peer review should not be confused with whether or not physicians actually perform the review. Most peer review organizations use nonphysicians for screening in the early stages of review, and third-party payers may employ physicians in the review process. The difference between peer and third-party review is which segment of the medical-care system sets the policies and the objectives being pursued.

Review activities vary according to the stage of treatment at which the review is conducted. In the case of hospital use, the review can be conducted on a prospective basis (before the patient's admission) for nonemergency cases, on a concurrent basis (during the hospital stay), or retrospectively (after discharge).

Review can also focus on many different decisions. The general course of treatment may be questioned--for example, is

surgery necessary? Alternatively, the course of treatment may not be reviewed but the appropriateness of the setting questioned. Should this patient be hospitalized or should he be treated as an outpatient? Is the length of an inpatient's stay in the hospital too long?

Another variation in review systems is the extent to which review is "focused." Review can be focused on certain physicians or hospitals, or on certain diagnoses--for example, acute myocardial infarction (heart attack). Similarly, certain procedures, such as tonsilectomies and hysterectomies, can be examined. Cost effectiveness may be increased by focusing on a small number of utilization decisions, rather than by reviewing all of them.

The final dimension is the nature of sanctions. Denial of reimbursement to a physician or hospital is the most common sanction available. Some reviewers use sanctions only rarely, preferring to induce compliance through education.

The federal government has been involved in health-care utilization review for some time. Since the inception of the Medicare program in 1965, utilization review by hospitals has been a condition of participation. Participation in Medicaid was made contingent upon utilization review in 1967. Medicare and Medicaid regulations permitted wide latitude in the manner of review, creating difficulties in specifying the nature and extent of review activity in the typical hospital. There is evidence, however, that some hospitals conducted review programs similar to PSRO review.

A newly emerging type of utilization review is the solicitation of second opinions about the appropriateness of surgery. Unlike formal review, the test of the appropriateness of a physician's surgical recommendation is whether it agrees with the opinion of a second physician. When the second physician disagrees, the patient then has to decide whether to proceed with the surgery.

PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS

As stated earlier, the PSRO program is intended to lower health-care costs and assure the quality of care for beneficiaries of health programs under the Social Security Act through utilization review. PSRO review is distinguished from other utilization review systems by its administrative structure, by the sanctions

it can bring to bear, and in many cases, by the nature of the review process itself.

Ultimately, PSROs are intended to review the full range of health-care services delivered under the Social Security Act. To date, however, PSROs have been concerned primarily with assessing the appropriateness of admissions to and lengths of stay in short-stay general hospitals. The extension of PSRO review to other aspects of health care--specifically ambulatory care, long-term care, and ancillary services (that is, laboratory tests, x-rays, and so forth)--has been very limited and is at present progressing slowly, largely because of budgetary constraints.

Implementation of PSRO review in short-stay hospitals has been gradual. In mid-1978, when the evaluation data analyzed here were collected, 118 of the total 203 PSRO areas (58 percent) had an active PSRO that had instituted review in at least one hospital. By the fall of 1979, that percentage had increased to 88 percent, and recently the figure has been about 95 percent. At the same time, active PSROs have been expanding their activities to cover a larger percentage of hospitals in their areas. In 1978, under half of all federal (Medicare and Medicaid) admissions were to hospitals where PSRO review had begun; in 1980, that figure had reached two-thirds, and the Health Care Financing Administration (HCFA) hopes to exceed 90 percent in 1981.

The expansion of PSRO activities since 1978 has not been accompanied by a comparable increase in program funding (see Table 1). Total program funding remained almost constant in current dollars from fiscal year 1978 through fiscal year 1980, indicating a substantial decline if inflation is taken into account. Thus the expansion of PSRO activities has required that a shrinking amount of funds be spread over an increasing number of PSROs and hospitals.

PSROs are local--or, in some sparsely populated areas, statewide--organizations, but the PSRO system involves state and national entities as well. As required by the statute, the Secretary of Health and Human Services (HHS) divided the nation into 203 "PSRO areas." In each area, physician organizations could

TABLE 1. PSRO PROGRAM FUNDING, FISCAL YEARS 1973-1981 (in Millions of Dollars)

Fiscal Years	PSRO Funding ^a
1973	4.5
1974	32.9
1975	36.2
1976	47.6
Transitional Quarter	12.0
1977	103.0
1978	147.2
1979	149.9
1980	155.2
1981	173.7

a. Figures for fiscal years 1973 through 1979 are from HCFA, PSRO 1979 Program Evaluation, p. 152.

apply to HHS for designation as that area's PSRO.⁷ All physicians in the area are free to join the local PSRO after it has been selected, and the majority of physicians in areas with PSROs are members. After an initial planning period, the PSRO is responsible for reviewing the appropriateness of health care provided under the Social Security Act in its area; the PSRO may

7. Although nonphysician organizations may also apply for PSRO status, the law prohibits the Secretary of HHS from designating such a group as a PSRO unless no qualified physician organization in the area has applied. No nonphysician organization has ever applied.