# Special Report

## Medicaid utilization control programs: Results of a 1987 study

by Phoebe A. Lindsey

*Medicaid agencies use both second surgical opinion programs (SSOP's) and inpatient hospital preadmission review programs to control utilization of services and thus program expenditures. This article reports on the 13 mandatory and 7 voluntary SSOP's and the 21 inpatient preadmission review programs, based on responses from 44 State Medicaid agencies.*

## Introduction

Programs to control patient utilization of health care services have been instituted by public and private payers for nearly two decades to reduce health care expenditures. Despite inconclusive evidence of the effectiveness of second surgical opinion programs (SSOP's) and inpatient hospital preadmission review programs to reduce expenditures, debate periodically recurs over mandating these and other utilization control programs.

The RAND Corporation assisted the Health Care Financing Administration (HCFA) in the first phase of a study of Medicaid utilization review systems by reporting on the literature on Medicaid SSOP's (Lindsey and Newhouse, 1989) and by contacting Medicaid agencies about their SSOP and inpatient hospital preadmission review programs, hereinafter referred to as preadmission review. This article reports the results regarding these two types of Medicaid utilization control programs.

To determine which State Medicaid agencies have SSOP's and/or inpatient hospital preadmission review programs and to identify the basic structures of these programs, Medicaid agencies in all 50 States and the District of Columbia were contacted in October 1987. Agencies were queried about high-volume and/or high-cost procedures, programs of inpatient hospital preadmission review, SSOP's, and studies they may have undertaken on variations in utilization of Medicaid-reimbursed procedures and the appropriateness of services offered to Medicaid patients. Forty-four agencies responded in full or in part.

SSOP's enable the patient who has been recommended for an elective surgical procedure to seek a second opinion from a consulting physician before making a decision about surgery. SSOP's have two primary objectives: to improve the patient's information base and decision processes and to cut costs attributable to questionable and perhaps unnecessary surgical procedures. SSOP's may be voluntary, with beneficiaries having the right to choose whether they wish to seek a second opinion before proceeding with surgery. Voluntary programs usually cover all elective procedures, although some may cover only certain procedures. Most voluntary programs permit the patient to proceed with surgery, regardless of whether the second opinion confirms the first. Some may permit the patient to seek a third opinion if he or she wishes to do so. Of the 44 reporting State Medicaid agencies, 7 have voluntary SSOP's.

Mandatory programs require beneficiaries to seek a second opinion if they want the insurance plan (including Medicare and Medicaid, for example) to pay for the surgery. Mandatory programs may cover all surgical procedures, but it is more likely that mandatory programs will specify a set of procedures for which a second opinion is required. If the second opinion does not confirm the first, some mandatory programs may require a third opinion. Others require that a peer review organization (PRO) or some other utilization review body determine whether the insurer will cover the procedure if the patient should proceed with surgery. Still others may permit the patient to proceed with surgery without further review or opinion. There are 13 Medicaid agencies that have mandatory SSOP's.

To control expenditures for hospital care, which consume nearly 45 cents of every dollar spent for personal health care services, Medicaid preadmission review programs require that a designated authority, usually a PRO or a program unit within the Medicaid agency, review and approve in advance a hospital admission for certain medical and surgical procedures. Most preadmission review programs, according to our findings, exempt emergency surgeries from review, and some may exempt same-day surgeries. Some preadmission review programs may cover only a select subset of admissions, and some may require that certain procedures be done only on an outpatient basis. Of the 44 States that responded, 27 indicated that they have a preadmission review program for inpatient hospitalization.

Based on responses, it appears that most Medicaid agencies are concerned with utilization issues and may have developed voluntary or mandatory SSOP's, preadmission review programs, or other efforts to help control utilization of medical and surgical services, both on an inpatient and an outpatient basis. It is also clear that these program labels are used somewhat interchangeably among agencies, i.e., what one agency deems an SSOP may be designated as a

Reprint requests: Phoebe A. Lindsey, RAND Corporation, P.O. Box 2138, Santa Monica, California 90406-2138.

preadmission review program by another agency. For purposes of this article, mandatory second surgical opinion programs are those in which agencies have specified a set of surgical procedures for which a second opinion must be obtained prior to the agency's payment for the procedure.

The absence of mention of a State(s) in the discussion of various program features indicates that the State did not report on that particular issue.

SSOP's are first considered, with a focus on the mandatory programs, but those States with voluntary programs are reported on as well. Preadmission review programs are discussed later in the article.

## Medicaid second surgical opinion programs

Of the 51 Medicaid agencies, 44 responded on second surgical opinion programs. These States are classified in the following categories: those with mandatory programs, those with voluntary programs, those that do not have and have never considered developing a program, those that have considered or are considering the development of such a program, those that have considered an SSOP and rejected it as a viable alternative, and those that have established some type of alternative program (Table 1). Two major categories of response are now considered: mandatory programs and voluntary programs.

### Mandatory programs

Currently, 13 State Medicaid programs have mandatory SSOP's: Colorado, Indiana, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, Oregon, South Carolina, Tennessee, Virginia, Washington, and Wisconsin. Responses were received from 11 of these States. Information on the Massachusetts program was obtained from other studies of this mandatory SSOP. Minnesota did not respond.

Information on the dates these mandatory programs were instituted, the number of procedures they cover, whether they track patient participation and nonconfirmation rates, whether board certification is required of physician consultants, the savings attributed to these programs, and whether and by whom the programs have been evaluated are presented in Table 2.

#### Starting dates

Of the 13 mandatory SSOP's, Massachusetts has been the longest in continuous operation, instituting its program in 1976. The newest program is that of South Carolina, which was instituted in December 1986. Data on this program are limited, given its recent implementation date.

#### Procedures covered

States used some or all of the following processes to determine which procedures should be covered by an SSOP:

- Review of procedures covered by other Medicaid agencies.
- Review of procedures covered by non-Medicaid SSOP's.
- Review of the literature.

**Table 1**

**Classification of Medicaid second surgical opinion programs, by State: 1987**

| Have program | | Have no program | | | Have alternative program[1] | |
|---|---|---|---|---|---|---|
| Mandatory (13 States) | Voluntary (8 States) | Never considered (6 States) | Have or are considering (10 States) | Considered and rejected (5 States) | (3 States) | Unknown (6 States) |
| Colorado | Alabama | Georgia | Arkansas | Connecticut | California | Alaska[2] |
| Indiana | Arizona | Iowa | Maryland | Nebraska | Delaware | Idaho |
| Massachusetts[2] | District of Columbia | Kentucky | Montana | New Hampshire | Florida | Maine |
| Michigan | Hawaii | Louisiana | Nevada | New York | | Mississippi |
| Minnesota[2] | Illinois | Oklahoma | North Carolina | Rhode Island | | New Mexico |
| Missouri | Kansas | South Dakota | Texas | | | Ohio |
| New Jersey | North Dakota | | Utah | | | |
| Oregon | Pennsylvania | | Vermont | | | |
| South Carolina | | | Wyoming | | | |
| Tennessee | | | West Virginia | | | |
| Virginia | | | | | | |
| Washington | | | | | | |
| Wisconsin | | | | | | |

[1]California's Medi-Cal program uses a system of prior authorization, i.e., authorization granted by a designated Medi-Cal physician in advance of the rendering of a service, for surgical procedures. The responsibilities of the physician consultant are not delegated. Should an unresolved difference occur between the consultant and provider as to the medical necessity for a given surgical procedure, the consultant or provider or beneficiary can request a second surgical opinion; Medi-Cal will pay for the second opinion. Delaware's Medicaid program uses a telephone inpatient pre-procedure review by the peer review organization (PRO) for six surgical procedures. The PRO conducts a retrospective review on a sample of hospital records. Florida uses a prior authorization for approximately 105 surgical procedures.
[2]No response.

SOURCE: The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies, Oct. 1987.

## Table 2

**Comparative features of mandatory second surgical opinion programs under Medicaid, by State: 1987**

| State | Date instituted | Number of procedures covered | Patient participation rate | Require board certification | Nonconfirmation rate | Savings attributed to SSOP[1] | Evaluated |
|---|---|---|---|---|---|---|---|
| Colorado | Sept. 1985 | 19 | Do collect data | — | — | Do not calculate | — |
| Indiana | Mar. 1986 | 18 | — | Board certification not required | — | — | Have not evaluated |
| Massachusetts[2] | 1976 | 7 | — | — | — | — | (3) |
| Michigan | 1979 | 17 | Do collect data | Requires board eligibility or certification | Do collect data | Do not calculate | By agency |
| Minnesota[2] | | — | — | — | — | — | — |
| Missouri | Oct. 1981 | 13 | Do collect data | NA | Do not collect | Do not calculate | By agency, no results noted |
| New Jersey | Apr. 1982 | 7 | Do collect data | — | Do collect data | Do not calculate | By agency, program too new to draw conclusions |
| Oregon | July 1984 | [4]PRO determines | No response | Use any board certified medical doctor | No response | $394,982 for 7/86-6/87—Do not deduct program costs | Ongoing agency monitoring indicates savings exceed costs |
| South Carolina | Dec. 1986 | 3 | — | — | — | — | — |
| Tennessee | Oct. 1984 | 4 | Do not collect | Board certification not required | Do not collect | NA | Have not evaluated |
| Virginia | July 1984 | 10 | Based on claims | — | Claims data (denials) only | $961,521 for 1986 Do not deduct—program costs | (5) |
| Washington | Jan. 1982 | 4 | Do collect data | NA | Do not collect | $656,000 for 1/82-1/83—Do not deduct program costs | (5) |
| Wisconsin | Feb. 1981 | 9 | Do collect data | — | Do collect data | Do not calculate | Wisconsin Department Health and Social Services |

[1]Second surgical opinion program.
[2]No survey response.
[3]Various evaluations of the program are reviewed by Lindsey and Newhouse (1989).
[4]Peer review organization.
[5]Virginia—Although the number of procedures performed has decreased, the spending has not decreased in proportion because the rates have increased. Washington—Agency has evaluated and will evaluate again in 1988. Evaluation recommended to continue current program. Are considering dropping cholecystectomies and adding other procedures.

NOTE: NA is not available.

SOURCE: The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies, Oct. 1987.

- Identification by medical consultants of procedures subject to overutilization and abuse.
- Identification by medical consultants of procedures subject to wide variation of opinion as to their appropriateness.
- Review of high-volume and/or high-cost procedures.

The number of procedures (or procedure categories) mandatorily covered ranges from 19 in Colorado to 3 in South Carolina. Information is presented in Table 3 on the procedures (or procedure categories) covered by each reporting State.[1]

The average number of procedures covered among the 11 States for which information is available is 10, and the median is 9. Only one procedure, hysterectomy, is covered by all 11 reporting States. Cholecystectomy is covered by 10 States, although Washington is considering dropping this procedure and Massachusetts dropped the procedure in 1981. Tonsillectomies and adenoidectomies are also covered by 10 States. Eight States cover hernia repairs and six States cover hemorrhoidectomy, although Colorado, which had once covered this procedure, has since dropped it. Five States cover cataract extraction and laminectomy/laminotomy procedures and four States cover dilation and curettage. Three States cover joint replacement (hip or knee), coronary artery bypass grafts, and spinal fusion procedures. Two States cover arthrotomy, breast surgery, bunionectomy, coronary

[1]Oregon did not report specific procedures covered. Their PRO determines, on a case-by-case basis, which procedures will require a second opinion for specific patients.

## Table 3

## Procedures covered by mandatory second surgical opinion programs under Medicaid, by State: 1987

| Procedures | States | Colorado | Indiana | Massachusetts | Michigan | Minnesota | Missouri | New Jersey | Oregon | South Carolina | Tennessee | Virginia | Washington | Wisconsin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total procedures | 111 | 19 | 18 | 7 | 17 | | 13 | 7 | | 3 | 4 | 10 | 4 | 9 |
| Arthrodesis | 1 | | ● | | | | | | | | | | | |
| Arthroplasty | 1 | | ● | | | | | | | | | | | |
| Arthroscopy | 1 | ● | | | | | | | | | | | | |
| Arthrotomy | 2 | ● | | | ● | | | | | | | | | |
| Breast surgery (except biopsy) | 2 | ● | ● | | | | | | | | | | | |
| Bunionectomy | 2 | | ● | | | | ● | | | | | | | |
| Cataract extraction | 5 | ● | ● | | ● | | ● | | | | | | | ● |
| Cesarean section, elective | 1 | | | | | | | | | | | ● | | |
| Cholecystectomy | 10 | ● | ● | | ● | | ● | ● | | ● | ● | ● | ● | ● |
| Colporrhapy, anterior and posterior | 1 | | | | | | ● | | | | | | | |
| Coronary angiography | 1 | ● | | | | | | | | | | | | |
| Coronary angioplasty | 2 | ● | ● | | | | | | | | | | | |
| Coronary artery bypass craft | 3 | ● | ● | | | | | | | | | ● | | |
| Dilation and curettage | 4 | | | | ● | | ● | | | | | ● | | ● |
| Disk surgery | 1 | | | | | | | ● | | | | | | |
| Ethmoidectomy | 1 | | | | ● | | | | | | | | | |
| Gastroplasty | 1 | ● | | | | | | | | | | | | |
| Hemorrhoidectomy | 6 | | ● | ● | ● | | ● | | | | | ● | | ● |
| Hernia repair | 8 | | ● | | ● | | ● | ● | | ● | ● | | ● | ● |
| Hysterectomy | 11 | ● | ● | ● | ● | | ● | ● | | ● | ● | ● | ● | ● |
| Joint replacement (hip or knee) | 3 | ● | | | | | | | | | | ● | | ● |
| Knee surgery | 1 | ● | | | | | | | | | | | | |
| Laminectomy/laminomy | 5 | | ● | ● | | | ● | ● | | | | ● | | |
| Lumbar laminectomy and discectomy | 1 | ● | | | | | | | | | | | | |
| Maxillectomy | 2 | | ● | | ● | | | | | | | | | |
| Meniscectomy | 2 | | | ● | ● | | | | | | | | | |
| Myelogram | 1 | ● | | | | | | | | | | | | |
| Myringotomy | 2 | | | | ● | | ● | | | | | | | |
| Nasal surgery | 1 | | ● | | | | | | | | | | | |
| Oophorectomy | 1 | ● | | | | | | | | | | | | |
| Osteotomy | 1 | | | | | | ● | | | | | | | |
| Pacemaker | 1 | ● | | | | | | | | | | | | |
| Sinusotomy | 1 | | | | ● | | | | | | | | | |
| Spinal fusion | 3 | ● | | | ● | | | ● | | | | | | |
| Submucous resection nasal septum | 2 | | | ● | ● | | | | | | | | | |
| Surgeries of the feet | 2 | | ● | | ● | | | | | | | | | |
| Surgical intervention for thoracic outlet syndrome | 1 | ● | | | | | | | | | | | | |
| Temporomandibular joint surgery | 1 | | ● | | | | | | | | | | | |
| Tonsillectomy/adenoidectomy | 10 | ● | ● | ● | ● | | ● | ● | | | ● | ● | ● | ● |
| Transurethral resection of prostate (TURP) | 2 | | ● | | | | | | | | | ● | | |
| Tympanostomy | 2 | | | | ● | | ● | | | | | | | |
| Varicose veins, excision of | 2 | | | ● | | | | | | | | | | ● |

[1] Minnesota has a mandatory program but did not respond.
[2] Oregon has a mandatory program, their peer review organization determines which procedures are subject to a second opinion.

NOTES: A total of 43 procedures are covered. States differ in the coding system they use (*International Classification of Diseases, 9th Revision, Clinical Modification* or HCFA Common Procedure Coding System) as well as the level of procedure category at which review and/or a second opinion is required, i.e., some States review at the most general level of procedure category–foot surgery–while others review at a more specific level–bunionectomy. These differences offer a challenge in presenting data and in comparing between and across States.

SOURCE: The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies, Oct. 1987

angioplasty, maxillectomy, meniscectomy, myringotomy, submucous resection (nasal septum), tympanostomy, and varicose veins. Twenty-one procedures are covered by only one State each.

The number of procedures covered has changed in 6 of the 13 States with mandatory programs. Three States—Colorado, Michigan, and Missouri—have added to their initial lists of procedures requiring a second opinion. Colorado and Michigan have also dropped certain procedures from mandatory review, as have Massachusetts, Oregon, and Wisconsin. The changes in procedures added and dropped by the reporting States are displayed in Table 4. Two procedures—bunionectomy and meniscectomy—have been added by some programs and dropped by others.

### Procedures required on outpatient basis

Five States—Colorado, Indiana, Michigan, Missouri, and Virginia—require certain procedures to be done on an outpatient basis. The processes used by States to determine which procedures should be done on an outpatient basis include:

- Review of procedures that other State Medicaid programs restrict to an outpatient basis.
- Review of procedures that other non-Medicaid programs such as Blue Cross and Blue Shield restrict to an outpatient basis.
- Input from medical consultants on which procedures could be restricted to an outpatient basis.

Colorado lists 14 procedure categories, including arthroscopy, cataract extraction, surgery of the feet, chronic pain control, eating disorders, sterilizations, and substance abuse that must be done on an outpatient basis. Virginia lists 95 procedures, and Michigan and Missouri each list several hundred procedures that must be done on an outpatient basis. The Oregon program has a suggested list of procedures that could be done on an outpatient basis, but the PRO may authorize any procedure to be done on an inpatient basis if the PRO deems it medically necessary. Indiana requires that excisions, fractures, arthrodiasis, oral surgery, extraocular procedures, and plastic surgery procedures that meet certain medical criteria be done on an outpatient basis. The remaining States—New Jersey, Tennessee, Washington, and Wisconsin—do not require certain procedures to be performed on an outpatient basis.

### Medicaid patient participation

The participation rate indicates what proportion of the Medicaid population recommended for elective surgery obtains a second opinion. Mandatory Medicaid SSOP's require that all Medicaid patients who are recommended for elective surgery for certain predetermined procedures obtain a second opinion before proceeding with the surgery. On that basis, one might assume that 100 percent of Medicaid patients recommended for an elective surgical procedure would participate in the program. There are exceptions to

**Table 4**

**Changes in second surgical opinion program coverage for selected procedures, by State: 1979-87**

| | Added | | | Dropped[1] | | | |
|---|---|---|---|---|---|---|---|
| Procedure | Colorado | Michigan | Missouri | Colorado | Massachusetts | Michigan | Wisconsin |
| Arthrotomy/synovectomy | | X | | | | | |
| Breast surgery | X | | | | | | |
| Bunionectomy | | | X | X | | | |
| Cataract removal | | X | | | | | |
| Cervical discectomy | X | | | | | | |
| Cholecystectomy | | | | | X | | |
| Colporrhaphy | | | X | | | | |
| Endarterectomy | | | | X | | | |
| Ethmoidectomy | | X | | | | | |
| Hemorrhoidectomy | | | | X | | | |
| Inguinal hernia | | | | | | X | X |
| Knee surgery | X | | | | | | |
| Lumbar discectomy | X | | | | | | |
| Meniscectomy | | X | | X | | | |
| Myelogram | X | | | | | | |
| Myringotomy | | X | X | | | | |
| Osteotomy | | | X | | | | |
| Sinusotomy | | X | | | | | |
| Spinal/spinal cord | X | X | | | | | |
| Submucous resection nasal septum | | X | | | | | |
| Surgeries of the feet | | X | | | | | |
| Transurethral resection of prostate (TURP) | | | | | | | X |
| Tympanoplasty | | X | X | | | | |

[1]Oregon has dropped certain procedures; they did not specify these procedures in their response.

NOTE: States differ in the coding systems they use (*International Classification of Diseases, 9th Revision, Clinical Modification* or HCFA Common Procedure Coding System) as well as the level of procedure category at which review and/or a second opinion is required, i.e., some States review at the most general level of procedure category—foot surgery—while others review at a more specific level–bunionectomy. These differences offer a challenge in presenting data and in comparing between and across States.

SOURCE: The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies, Oct. 1987.

**Table 5**

**Circumstances under which second surgical opinion program waivers[1] may be granted, by State: 1987**

| Circumstance | Colorado | Indiana | Massachusetts | Michigan | Minnesota[2] | Missouri | New Jersey | Oregon[3] | South Carolina[4] | Tennessee | Virginia | Washington | Wisconsin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Patient in pain or at risk | | ● | ● | ● | | ● | ● | | | ● | ● | ● | ● |
| Patient lives too far from provider | | | ● | ● | | | ● | | | ● | | ● | |
| Patient is enrolled in managed care program | | | | ● | | ● | | | | ● | | ● | |
| Patient is eligible for Medicare | | | | ● | | | | | | ● | | ● | |
| Patient is retroactively determined to be Medicaid-eligible | | | | ● | | ● | | | | ● | | ● | |
| Qualified physician or specialist unavailable | | | | ● | | | | | | | ● | ● | |
| Obtaining second opinion would cause severe medical hardship | | ● | ● | ● | | | | | | | | case by case | |
| Patient also covered by private insurance and has obtained second opinion under this insurance | | | | ● | | | | | | ● | ● | | |
| If procedure performed is incidental to a more major procedure | | | | | | | | | | ● | ● | | |

[1] Data obtained from telephone followup. Unable to reach Colorado or Wisconsin agencies at time of followup.
[2] No response.
[3] Peer review organization has flexibility to determine.
[4] No waivers.
SOURCE: The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies, Oct. 1987

required participation, however. Some programs have waiver provisions to exempt patients who are in pain or at risk, for whom obtaining a second opinion would be a hardship or who live too far from a consulting physician. A range of circumstances under which States may not require a patient to obtain a second opinion is listed in Table 5.

Six States (Colorado, Michigan, Missouri, New Jersey, Washington, and Wisconsin) maintain information on their participation rates, either through the Medicaid agency or through the PRO with which the Medicaid agency contracts for services. Virginia has information on the claims paid, but does not calculate program participation rates. Tennessee does not collect these data. For this study of the States, we did not request specific participation rates.

### Requirements for consultant participation

States vary in the requirements they have for participating consultants who offer second opinions. Michigan and Oregon require that the consultant be a surgeon of the same specialty or subspecialty as was the diagnosing physician. Surgeons and nonsurgeons in the same field may offer second opinions in New Jersey. Tennessee permits any surgeon to offer a second opinion. In Indiana, Missouri, Virginia, Washington, and Wisconsin, any physician, including a nonsurgeon, may render a second opinion.

### Board certification

Section 9432 of the Omnibus Budget Reconciliation Act of 1986[2] requested information on the number of board-certified or board-eligible physicians in a State who provide care and services, including second opinions, to Medicaid patients. The number of board-eligible physicians, by State, is unknown; these data are not tracked or reported by any source known to the author. Board certification may be required of the diagnosing and/or the consulting physician. The requirement for board certification varies by State.

Some States may require that both the diagnosing and the consulting physician be board certified. Michigan, New Jersey, and Oregon require all consulting physicians to be board certified (Michigan notes that consultants may be board eligible). Board certification is not required in Tennessee. Neither Missouri nor Washington collect data on board certification.

[2] This legislation requires the Secretary of Health and Human Services to report to Congress on Medicaid State utilization review systems.

### Nonconfirmation rates

If the second opinion obtained does not agree with the opinion of the diagnosing physician who has recommended surgery, the second opinion is a nonconfirming opinion. Nonconfirmations do not indicate necessarily that the first opinion was wrong and that unnecessary surgery has therefore been averted, although some have made this interpretation. Nonconfirmations simply indicate a difference of opinion between two physicians, and there is clearly the potential for error in either or both the first and/or the second opinion (Lindsey and Newhouse, 1989).

In the case of a nonconfirming second opinion, the Medicaid agency may require the patient to seek a third opinion, have the case reviewed by the PRO for a decision, or require some other action before a patient can proceed with surgery.

Michigan, New Jersey, and Wisconsin maintain data on the nonconfirmation rates of second opinions rendered. Virginia has information on the number of claims denied because they did not meet the second opinion criteria, but they do not calculate nonconfirmation rates.[3]

### Payment policies for nonconfirmed surgeries

Seven States—Michigan, Missouri, New Jersey, Tennessee, Virginia, Washington, and Wisconsin—will pay for the patient's surgery even if the second opinion does not confirm the first. Colorado and Oregon require that the PRO review cases of nonconfirmation and make case-by-case decisions. Both Missouri and Oregon permit a patient to seek a third opinion if he or she wishes.

### Medicaid payment rates

Medicaid payment rates to consulting physicians for rendering second opinions vary in some programs according to the complexity of the assessment. The 1987 rates for the most comprehensive type of assessment ranged from $28 (Missouri) to $59.48 (Michigan). The average payment rate for the six programs that provided rate data is $44.36.

### Evaluation of mandatory programs

All but two States (Indiana and Tennessee) reported that some type of evaluation of their programs had been done or is done on a regular basis. Virginia reported that although the number of procedures has decreased since the implementation of its SSOP, the spending has not decreased in proportion because the rates have increased. Washington had previously evaluated its program, which resulted in a recommendation to maintain the current program. It has considered dropping the cholecystectomy procedure from its list of required procedures and is considering adding other (unspecified) procedures. Washington planned to do another evaluation of its program early in 1988.

Wisconsin's program has been evaluated at several intervals, the first of which was to determine whether the program should be retained. The legislature decided to retain the program, based on preliminary reports by the Department of Health and Social Services that evaluated the first 8 months of operation. The SSOP netted more than $1.8 million in total savings (savings minus cost) for the Medicaid program (both State and Federal share), and the program returned almost $22 in savings for every dollar of program cost (Tyson, 1985). These cost figures do not include the full costs of alternative surgical procedures or medical costs, nor could they, given the short interval between program installation and evaluation, account for the downstream medical and surgical costs that might accrue among patients who deferred surgery.

An evaluation by Poggio et al. (1985) of Massachusetts' mandatory Medicaid SSOP, the Consultation Program for Elective Surgery (CPES), estimated the direct cost savings to Medicaid to be about $110,000 annually (in 1979 dollars), about one-half the amount required to administer the program. However, these researchers estimated indirect savings almost 10 times as great because of the sentinel effect, whereby physicians were claimed to have proposed less surgery because of their awareness of the program.

The evaluation, which presents data from CPES's March 1977 inception through September 1982, concluded that across the participant population there was virtually no effect on health outcomes because the program caused relatively few individuals to change treatment and because those who did change experienced little if any direct effect on their health. Among those who did change, the slightly-better-than-expected status of patients persuaded to have surgery exceeded the slightly-worse-than-expected status of patients discouraged from having surgery. The evaluation emphasized that these findings pertain only to the population that participated in the SSOP. Nothing is known about the health status of those who were influenced not to seek surgery as a result of the sentinal and other indirect effects of the program.

Calculating the savings attributed to SSOP's is a major focus of evaluation efforts. Only three of the reporting States—Oregon, Virginia, and Washington—calculate the savings they believe accrue to their program as a result of having an operational SSOP. These States reported on their savings as follows:

- Oregon: For the period July 1, 1986 to June 30, 1987, savings totaled $394,982. Based on a total of 162,524 Medicaid recipients in 1987, this would amount to a savings of $2.43 per recipient.
- Virginia: For the 1986 calendar year, savings totaled $961,521. Based on a total of 314,190

[3]Agencies were asked if they collected such data, but the rates were not requested.

Medicaid recipients in 1987, this would amount to a savings of $3.06 per recipient.

- Washington: For the period January 1, 1982 through December 31, 1982, savings totaled $656,000. Based on a total of 357,879 Medicaid recipients in 1987, this would amount to a savings of $1.83 per recipient.

All three States indicated that these figures do not account for the costs of administering the program or costs to patients for time, travel, or other expenses related to obtaining a second opinion. Neither do these figures account for the costs of alternative surgical procedures a patient may have, for the costs of alternative medical care, or for the downstream medical and surgical costs that may accrue when a surgery is merely deferred or another intervention is necessary to improve the patient's status for the particular condition in question. On the other hand, the data do not account for any "sentinel" effect; i.e., the cost avoidance attributed to a reduction in the number of procedures because physicians are aware of the program's restrictions. Published literature on the Massachusetts and Wisconsin Medicaid programs address the sentinel effect.[4] The information on whether or how States might determine the presence and extent of such an effect was not requested for this study.

Hence, these cost savings figures reflect only a portion of program costs. Additional data are needed regarding the number of operations proposed, the number approved, the number performed, and how these data compare with surgical trends prior to the installation of the SSOP.

### Voluntary programs

Seven States—Alabama, Arizona, Hawaii, Illinois, Kansas, North Dakota, and Pennsylvania—as well as the District of Columbia have voluntary SSOP's. The District of Columbia has always offered Medicaid patients the option of a second opinion. Three of these States—Alabama, Arizona, and Pennsylvania—have considered establishing a mandatory program or currently have parts of their programs that are mandatory in nature.[5] Alabama, in fact, is currently evaluating the cost effectiveness of instituting a mandatory program for that State.

Voluntary SSOP's have little, if any, potential for containing costs (Roenigk and Bartlett, 1982). Participation rates are as low as 2 percent or less of the eligible population, and at least one study has shown that a majority of those who obtain a second opinion through a voluntary SSOP would have obtained a second opinion even in the absence of a program (Poggio et al., 1985).

## Medicaid agencies without SSOP's

Of the 44 Medicaid agencies that responded, 21 indicated that they do not now have an SSOP. Six States have never considered implementing such a program, 10 States have considered or are considering an SSOP, 5 States have considered and rejected an SSOP, and 3 States use an alternative program(s) such as inpatient hospital preadmission review (Table 1).

Because mandating SSOP's is a recurring issue at both the Federal and the State levels, the category of particular interest is that of States that have considered but rejected an SSOP—Connecticut, Nebraska, New Hampshire, New York, and Rhode Island.[6] Connecticut had a program in place for about 15 months (October 1982 through December 1983) but allowed the program to "sunset" when the administering Department of Income Maintenance could not determine that the program was having any positive effect. New York established a mandatory program in 1976, but following a 1977 court ruling that the law violated the Social Security Administration's requirement for providing surgical services to an eligible person when an operation is indicated, the State dropped the program in July 1978.

Nebraska evaluated the feasibility of a mandatory program but, according to a program and planning specialist in the Medicaid program, determined that it would not be "cost effective or administratively prudent in rural Nebraska." New Hampshire undertook an extensive research project on surgeries performed in calendar year 1985; the Director of the New Hampshire Department of Health and Human Services reported to the Health Care Financing Administration that the results "clearly show that implementing a mandatory second surgical opinion program in New Hampshire would have a negative financial impact upon the Medicaid program." New Hampshire's PRO and its hospital tissue committees provide an extensive review program as well as a sentinel effect which, in the view of State policymakers, obviates the need for a mandatory SSOP. Similarly, Rhode Island has studied the feasibility of a mandatory SSOP "on more than one occasion" and agency staff concluded that because they had experienced appropriate utilization of surgical procedures, "a mandatory formal second surgical opinion program is not warranted."

## Inpatient preadmission review programs

Many Medicaid agencies use an inpatient hospital preadmission review program in lieu of or to complement an SSOP program to control utilization and costs. Of the 44 States that responded, 27

[4]Poggio, et al. (1985) and Tyson (1985) further discuss the sentinel effect.

[5]In Pennsylvania's case, we refer to its proposed program, which was implemented in March 1989.

[6]Quotations provided for the States are from the Medicaid agency responses to the survey.

**Table 6**

**Medicaid inpatient hospital preadmission review programs, by State and date instituted: 1987**

| State | Date instituted |
|---|---|
| Alabama | Oct. 1986 |
| Alaska | Not reported |
| Arizona | 1983-87[1] |
| California | 1970 |
| Colorado | Sept. 1985 |
| Delaware | Oct. 1984 |
| Florida | Sept. 1985 |
| Hawaii | Oct. 1985 |
| Indiana | Mar. 1986 |
| Kentucky | Sept. 1983 |
| Maryland | July 1981 |
| Michigan | Oct. 1984 |
| Montana | Mar. 1985 |
| Nevada | Mar. 1977 |
| North Carolina | Nov. 1986 |
| North Dakota | June 1985 |
| Oregon | July 1983 |
| Pennsylvania | Feb. 1988 |
| Rhode Island | Mar. 1982 |
| South Carolina | Jan. 1986 |
| Tennessee | Nov. 1986 |
| Utah | Aug. 1987 |
| Vermont | 1979 |
| Washington | Jan. 1969 |
| West Virginia | Feb. 1987 |
| Wisconsin | July 1985 |
| Wyoming | Oct. 1987 |

[1]For seven different plans.

SOURCE: *The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies*, Oct. 1987.

indicated that they have an inpatient hospital preadmission review program. Inpatient hospital preadmission review programs attempt to control Medicaid expenditures for acute hospital care by requiring that admissions for all nonemergency procedures or for a subset of procedures be approved before the patient is admitted to the hospital. State Medicaid agencies that have established review programs and the dates on which those programs were instituted are shown in Table 6. Seven States that have mandatory SSOP's—Colorado, Indiana, Michigan, Oregon, Tennessee, Washington, and Wisconsin—also have inpatient hospital preadmission review programs.

## Authorizing body

In 56 percent of the States that responded (15 of 27), the organization that authorizes hospital admissions is the PRO. The Medicaid agency is the authorizing agency for 41 percent (11 agencies) of the agencies. One agency (Indiana) uses its fiscal intermediary, Blue Cross and Blue Shield, as the authorizing body for its preadmission review program.

## Procedures, services, and treatments covered

Forty-one percent of the respondents review all elective admissions, exempting, in some cases, certain procedures such as emergency admissions.[7]

[7]Six agencies, or 22 percent of the respondents, did not reply to this question.

Some programs that do not exempt emergency admissions require that they be certified within a 24-hour period if the hospital wants to be reimbursed for the admission. California and Florida specify a large number of procedure codes that are included in their review programs. The Utah Medicaid program requires prior authorization for physician inpatient hospital psychiatric services and for inpatient hospital psychiatric admissions.

## Types of admissions excluded

Seventy-four percent of the Medicaid preadmission review programs (20 programs) exclude emergency admissions from preadmission review, and 30 percent (8 programs) exclude same-day surgeries from preadmission review.

In addition, programs may exclude other types of admissions from preadmission review. Eight programs (30 percent of respondents) exclude labor and delivery-related admissions from review, and five programs (19 percent) exclude psychiatric admissions from review. Other types of admissions, each excluded by three programs, are drug and substance abuse admissions and rehabilitation hospitalization admissions. Types of admissions excluded by specific programs are displayed in Table 7.

## Procedures required on outpatient basis

Fifty-two percent (14 agencies) of the programs require certain categories of procedures, including endoscopy, injections, oral surgery, and periodontics to be done on an outpatient basis. Five States—Arizona, Montana, North Dakota, Tennessee, and Vermont—require from 1 to 14 major categories of services be done on an outpatient basis. The remaining 9 States require from 5 to 513 specific procedures to be done on an outpatient basis. These procedures may be categorized by body system, by the *International Classification of Diseases, 9th Revision, Clinical Modification* code, or by some other system.

## Reimbursement policies

Fifty-two percent (14 agencies) of the programs reimburse a hospital if a patient is admitted without advance approval.

## Agency monitoring of programs

Agencies vary by the type and extent of monitoring they do for their preadmission review programs. Seventy percent (19 programs) track the number of times preadmission review was sought, and 67 percent (18 agencies) track the number of times approval for admission was denied. Only 44 percent (12 agencies) of the programs track the number of admissions for which no preadmission review had been sought. A slightly higher proportion of agencies, 48 percent (13 agencies), track the number of times approval was

**Table 7**

**Procedures excluded from inpatient hospital preadmission review programs, by State: 1987**

| Procedures | States | Arizona | Colorado | Delaware | Hawaii | Indiana | Kentucky | Maryland | Michigan | Montana | North Carolina | North Dakota | Oregon | Pennsylvania | South Carolina | Tennessee | Utah | Wyoming |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total procedures | 25 | 0 | 0 | 4 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 4 | 0 | 3 | 1 | 4 | 1 | 1 |
| C-Section, scheduled | 1 | | | • | | | | | | | | | | | | | | |
| Drug and substance abuse control | 3 | | | • | | | | | | | | • | | • | | | | |
| Labor/delivery | 8 | | | | | • | • | | | • | • | • | | | • | • | | • |
| Medicare covered patients | 2 | | | | | | | | | | • | | | | | • | | |
| Newborn care, routine | 1 | | | • | | | | | | | | | | | | | | |
| Psychiatric | 5 | | | • | | | | | | | | • | | • | | • | • | |
| Rehabiliation | 3 | | | | • | | | | | | | • | | • | | | | |
| Retroactive Medicaid eligibility | 2 | | | | | | | • | | | | | | | | • | | |

SOURCE: The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies, Oct. 1987

initially denied and the patient was later admitted with approval.

Eight agencies (30 percent) calculate cost savings they attribute to their inpatient hospital preadmission review programs. Only four States—Indiana, Michigan, Nevada, and Oregon—reported their savings for a recent 12-month period, as follows:

- Indiana: $26,596,988 for the period October 1986 through October 1987. Savings are calculated by multiplying a 1983 average hospital cost per day of $325 by the number of days of reduced utilization.
- Michigan: $2,719,574 for the period October 1, 1986 through September 30, 1987. Savings are determined from a 20-percent review to validate urgent and emergent care cases. The cost savings from the number of cases being denied (minus the reversals) are added to the physician gross adjustments and the claim adjustments for noncompliance with program policy. The total cost savings does not include savings from deterrence or the sentinel effect.
- Nevada: $3,000,000 for the period January 1, 1986 through December 31, 1986.
- Oregon: $460,000 for the period July 1986 through June 1987.

None of the four reporting agencies deducted the cost of administering the program from the calculated savings. All four States included savings of hospital costs, and Michigan included the savings of physician costs as well. Among these four States, only Oregon does not reimburse for denials for inpatient services. Indiana alone deducted the costs of outpatient services offered in lieu of inpatient services in calculating its cost savings. Additional cost savings information is needed from each of these programs before any substantive conclusions can be drawn.

## Evaluation of programs

Evaluation reports of preadmission review programs found in the literature have focused primarily on programs that review the proposed admission of patients to long-term care facilities rather than the admission of patients to acute care hospitals. Cappelli and Stralberg (1976), however, studied the effect of utilization controls in three State Medicaid programs, Michigan, Virginia, and California, including a look at California's inpatient hospital program which was instituted in April 1970. The researchers used both before and after (preadmission review program implementation) trend analysis of utilization statistics and a sampling of manual review records to determine the effects traceable to specific denials on care level transfer. Cappelli and Stralberg found a trend of declining denial rates that they indicated strongly suggested that utilization control programs have an ongoing deterrent effect as providers become familiar with review criteria over time. In California, hospital admission and discharge rates for the remainder of 1970 were 13.1 percent lower than expected based on trends prevailing before the preadmission review program was instituted.

**Table 8**

**States that do not have Medicaid inpatient hospital preadmission review programs: 1987**

| Never considered (6 States) | Have or are considering (4 States) | Have considered and rejected or replaced (4 States) | Unknown (10 States) |
|---|---|---|---|
| District of Columbia | Arkansas | Iowa | Idaho |
| Georgia | Connecticut | Kansas | Louisiana |
| Missouri | Illinois | New Hampshire | Maine |
| New Jersey | Nebraska | Oklahoma | Massachusetts |
| Texas | | | Minnesota |
| Virginia | | | Mississippi |
| | | | New Mexico |
| | | | New York |
| | | | Ohio |
| | | | South Dakota |

SOURCE: The RAND Corporation: Data from the Omnibus Budget Reconciliation Act of 1986 Study of Medicaid Agencies, Oct. 1987.

One-third of the agencies (nine programs) have evaluated their preadmission review programs.[8] Two States, Indiana and Montana, indicate that their average length of stay had dropped as a result of their review programs.[9] The Florida program is currently in the process of determining why certain procedures and diagnoses are frequently denied and whether these denial rates suggest that such procedures should be subject to preadmission certification.

## States without preadmission review programs

States that reported not having an inpatient hospital preadmission review program are shown in Table 8. Four States have never considered a program, 4 have considered or are considering such a program, 4 States have considered a preadmission review program and have rejected this option and/or adopted another utilization review alternative, and the status of 10 States is unknown.

The experience of States that have considered and rejected an inpatient hospital preadmission review program—Iowa, Kansas, New Hampshire, and Oklahoma—should be of particular interest to decisionmakers who are considering mandating this type of utilization control program. Agency staff indicated their reasons for either eliminating their programs or choosing not to initiate programs as follows:

- Iowa: On October 1, 1987, Iowa changed its reimbursement system from a per diem basis to a diagnosis-related group (DRG) type system. Under the per diem reimbursement system, a 100-percent preadmission review was conducted. To reduce the cost of the review process, Iowa has instituted a sample retrospective review.
- Kansas: This State has, in the past, considered developing an inpatient hospital preadmission review program, but determined that "it would not have been cost effective."
- New Hampshire: For a 1-year period, beginning in July 1985, New Hampshire had a preadmission review program. The State discontinued the program, in large part because providers were not complying with the requirements, i.e., failing to notify the authorizing peer review organization (PRO) of an admission or notifying the PRO in inappropriate cases. The unnecessary review resulted in increased costs. New Hampshire now retrospectively reviews 100 percent of cases.
- Oklahoma: This State's review program that covered 183 procedures was eliminated on October 1, 1986, because the agency believed that providers were familiar with (and presumably in compliance with) the criteria for inpatient admissions. A 100-percent retrospective review is done of any admission involving one or more of the 183 procedures formerly subject to preadmission review.

## Discussion

This study, which focused primarily on identifying existing Medicaid SSOP and inpatient hospital preadmission review programs, nevertheless offers some insight into the numbers of States that have SSOP's and preadmission review programs, the dimensions of these programs, and how States monitor and evaluate them. Findings from the study, complementary findings from other research, and areas that remain to be investigated are now addressed. SSOP's are discussed first, followed by preadmission review programs.

Thirteen States, one-fourth of the 51 Medicaid agencies, have mandatory SSOP's, and 11 of those programs responded. An average of 10 surgical procedures or procedure categories are subject to review in each of the mandatory States, with a range between 4 and 19 covered procedures. Only one procedure, hysterectomy, is covered by all 11 reporting programs. Ten programs cover cholecystectomies and tonsillectomies and adenoidectomies. Twenty-one procedures are covered by only one State each. Thus, although there are three procedures that are covered by all or nearly all of the programs, a large number of procedures are covered by only one, or in some cases, two or three States. Clearly there is considerable variation in the procedures that mandatory States subject to coverage.

Fewer than one-half, 5 of the 11 reporting mandatory programs, require that certain procedures be done on an outpatient basis, but the number of procedures that must be done on this basis ranges from 14 to several hundred. Further research is needed to determine if there are commonalities among those procedures required to be performed on an outpatient basis. Estimates of cost savings resulting from the use of outpatient rather than inpatient services would be a useful indicator of cost

[8]Some agencies responded to this question by indicating regular monitoring activities they undertake. Others indicated that formal evaluations had taken place or were scheduled to take place.
[9]One would expect that the admission rates would drop as a result of a review program; such changes were not reported.

effectiveness of SSOP's, but such studies were not discovered in the course of this research.

Only three States require that consultants who offer second opinions be board certified. Board certification suggests that the physician has attained the highest level of training possible in his or her specialty and thus is especially qualified to determine, for the specialty in which he or she is certified, whether a surgical procedure is the appropriate course of action for the referred patient. It is not known whether other States do not require board certification because they believe they could not obtain adequate physician participation, whether board-certified physicians find the Medicaid pay scales unacceptable, whether tracking the board-certification status seems an extra administrative burden, or for what other reasons States do not require board certification.

How States monitor program costs and effectiveness, including access to care, varies widely. SSOP's, both mandatory and voluntary, have been available to certain populations, including the Medicaid population in some States, for as long as 16 years. The body of literature on SSOP's is more descriptive than evaluative, though the Massachusetts' Consultation Program for Elective Surgery (CPES) and a variety of programs in New York have been analyzed to varying degrees.

Poggio et al.'s (1985) study is the most comprehensive of the several studies of Massachusett's CPES,[10] but the study methodology was incomplete and does not enable one to draw definitive conclusions about the effects of CPES on patient outcomes or its ability to control costs. The study does not, for example, include discounted downstream medical and surgical costs that may have accrued to the patient after the study was concluded. The findings of the Poggio et al., (1985) and other SSOP studies are discussed by Lindsey and Newhouse (1989), who indicate that the effects of an SSOP on cost containment and patient outcomes can most effectively be evaluated only when the study follows equivalent cohorts over time, one cohort that is exposed to an SSOP and a control group that is not; establishes standard, comprehensive definitions of costs and outcomes of interest; follows changes in these variables over time; and is on a large enough scale to detect, if present, changes in the rate at which physicians recommend surgery (i.e., the so-called sentinel effect).

The evaluations of SSOP's have not been comprehensive nor, in some cases, rigorous enough to provide definitive information about the ability of such programs to contain costs or their effects on patient outcomes (Lindsey and Newhouse, 1989). Studies reviewed did not use an appropriate control group against which study effects could be measured; in fact, some studies did not use any control group. Most of the studies were incomplete in their definition and thus their measurement of cost and patient outcomes. None of the studies adequately addressed downstream medical and surgical costs likely to accrue to the patient who defers surgery.

The direct effects of the SSOP's were imprecisely or incorrectly measured in some cases and no study has yet comprehensively assessed the indirect effects, including the so-called sentinel effect, on patient outcomes and cost. The potential for error in both the first and second opinions, although perhaps recognized, is rarely acknowledged and has not been explored in terms of the potential for an SSOP to make matters worse for patients for whom errors in recommendations are made (Newhouse and Lindsey, 1988). In short, the evidence for many of the assumptions made and beliefs held about the potential of SSOP's to control costs is limited and inconclusive.

The limited scope of our study did not permit a thorough investigation of the ways in which mandatory SSOP's might impede access to care. Such impediments might include: forcing patients to travel unusual distances to seek second opinions or care, delaying the patient from obtaining care by requiring him or her to take time to obtain a second opinion, deferring necessary surgery when a second opinion does not confirm the first, or requiring the patient to share in the costs of obtaining an opinion or having the surgery.

Waivers to obtaining a second opinion are provided by some States to avert any impediments to access to care for patients in certain circumstances. The Massachusetts CPES program, for example, has attempted to avert any impediments to access to care through a waiver system, using waivers when the patient is in pain or at risk, patients live more than 15 miles from the nearest consultant, and participation would entail some undue burden.

A study reported by Gertman et al., 1980 found that 10.5 percent of the Massachusetts CPES population studied received waivers for endangering conditions. Results of the Poggio et al. study (1985) indicated that 6 percent of all cases in their study population received waivers for hardships.

It has been suggested that mandatory SSOP's may inhibit access by introducing unnecessary delays when a patient seeks care. For those obtaining at least one consultation under the CPES, the average time spent going through the program was 18 days (Poggio et al., 1985).

Delay has also been assumed in some instances where a second opinion does not confirm the first. Poggio et al. (1985) explored this issue by observing the relative changes in surgery rates among confirmed and nonconfirmed participants in the New York and Michigan Medicare SSOP demonstration, based on the surgery experiences of the program's first 2 years of participants. These followup data were used to do life table analyses. In New York, the proportion of participants having had surgery increased by approximately the same number of percentage points in the period following the first year from program contact for both the confirmed and nonconfirmed participant. In Michigan, 34 percent of the surgery in

[10]Additional discussions of CPES are provided in Gertman et al. (1980), Martin (1982), and Martin et al. (1982).

nonconfirmed cases took place in the second year after contact, but no surgery took place among confirmed cases during the second year. The number of cases is sufficiently small that the increases after the first 12 months are not statistically significant. These researchers concluded that they could find no clear evidence that nonconforming second opinions lead to delayed surgeries, or if such delay occurs, it is a delay of more than the 2½-year followup period of the study. However, to firmly establish the magnitude of the delay, one would have to compare delays with a second opinion program to delays without a program; the above data do not permit this comparison.

This study provides a baseline of information on mandatory Medicaid SSOP's. Given the many assumptions made about program effectiveness and the potential for congressional and State commitments to be made on the basis of assumptions that may not withstand scrutiny, further study of the effectiveness of SSOP's is in order. It must first be determined just what SSOP's are intended to achieve: controlling utilization while ensuring access, reducing costs attributed to unnecessary surgical procedures, ensuring that controls on utilization do not encourage underutilization and thus imperil quality of care, other purposes, or all of these ends simultaneously. Second, further exploration of the existing programs should reveal additional insight into the question of program effectiveness. Finally, a defensible study methodology must be designed and undertaken that will permit valid comparisons to be made and useful extrapolations to be drawn from these comparisons.

The findings on inpatient hospital preadmission review programs, organized in 27 of the 44 States that responded, are also baseline in nature. States vary in their requirements for the review of admissions: some review all elective admissions, some exclude emergency admissions or same-day surgical procedures from review, and some exclude other types of admissions, such as labor- and delivery-related and/or psychiatric admissions from review. Slightly more than one-half of the programs require certain categories of procedures, including endoscopies, injections, oral surgery, and periodontics, to be done on an outpatient basis.

Based on a review of the literature, little is known about the effectiveness of inpatient hospital preadmission review programs, including their ability to control Medicaid costs. Cappelli and Stralberg (1976), in a study done more than a decade ago, found a decrease in length of stay in California hospitals that might be attributed to the sentinel effect of the newly installed preadmission review program. The majority of other preadmission review studies concentrate on the review that occurs before a patient is admitted to a long-term care facility.

Criteria similar to those used to evaluate SSOP programs (Lindsey and Newhouse, 1989) could be used to determine the extent of cost savings attributable to preadmission review programs. Evaluation studies should include a control group as well as a study group; comprehensive definitions of cost and outcomes; assessment of changes in these variables over time; and be a large enough scale study to detect, if present, changes in the rate at which physicians recommend hospitalization. A well-designed study that would address issues of program effectiveness among these 27 agencies would enhance our understanding of the effectiveness of preadmission review programs.

## Conclusions

This study was intended to provide a snapshot of two types of utilization control programs established by Medicaid agencies; a description of the types of data these agencies collect and evaluate; the program aspects that each monitors and an indication, where possible, of the numbers of board-certified physicians who participate. The results do, in fact, provide a baseline descriptive study of the 13 mandatory and 7 voluntary Medicaid SSOP's and the 27 Medicaid inpatient hospital preadmission review programs among the 44 reporting States.

Ways in which such programs attempt to avoid impediments to access, such as exempting emergency procedures from review or waiving the requirements for second opinions in some cases, have been discussed. A much more comprehensive study, however, would be necessary to determine the extent to which such programs impede access. One would need to consider cost sharing, for example, as well as exemptions, waivers, delays in obtaining care, and other issues to determine if and how such programs as SSOP's and preadmission review impede access to care.

The scope of the study did not provide information from which one could draw conclusions about program effectiveness and whether such programs should be mandated throughout Medicaid, and perhaps across the Medicare programs. Nor have previous assessments of SSOP's, primarily the Massachusetts and Wisconsin programs, been comprehensive or definitive enough to permit one to draw final conclusions about the worthiness of replicating these efforts. Such studies should be undertaken and should, at a minimum, meet the criteria defined by Lindsey and Newhouse (1989).

## References

Cappelli, A. P., and Stralberg, H.: Impact of Utilization Controls (UC) on Medicaid. HEW Contract No. SRS-74-45. Universal Analytics, Inc., Playa Del Rey, Calif. July 1976.

Gertman, P. M., Stackpole, D., Levenson, D., et al.: Second-opinions for elective surgery: The mandatory Medicaid program in Massachusetts. *New England Journal of Medicine* 302(21):1169-1174, May 1980.

Lindsey, P. A., and Newhouse, J. P.: Second surgical opinion programs: A review of the literature, The RAND Corporation, N-2797-HCFA, Santa Monica, Calif. Feb. 1989.

Martin, S. G.: The sentinel effect in second opinion programs. *Employee Benefit Plan Review* 36(8):24-26, Feb. 1982.

Martin, S. G., Shwartz, M., Whalen, B., et al.: Impact of a mandatory second-opinion program on medical surgery rates. *Medical Care* 20(1):21-45, Jan. 1982.

Newhouse, J. P., and Lindsey, P. A.: Do second opinion programs improve outcomes? *Journal of Health Economics*, 7(3):285-88, Sept. 1988.

Poggio, E., Goldberg, H., Kronick, R., et al.: Second Surgical Opinion Programs: Analysis of Public Policy Options. Abt. Associates. Cambridge, Mass. Mar. 1985.

Roenigk, D., and Bartlett, L.: Controlling Medicaid costs: Second surgical opinion programs. Washington, D.C.: National Governors' Association, Nov. 1982.

Tyson, T. J.: The evaluation and monitoring of a Medicaid second surgical program. *Evaluation and Program Planning* 8:207-15, 1985.