7.
Medicare Physician Payment and Medical Technology

As the ancients say wisely, have a care of the main chance and look before you leap, for as you sow, you are like to reap.

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INTRODUCTION

Although Medicare's method of payment for inpatient hospital services has recent] y been a1tered, its charge-based system of payment for physicians' services remains (see ch. 2). Medicare expenditures for physician services centinue to grow rapidly, however, and changes in payment are currently being considered. The recent changes in Medicare's system of payment for inpatient hospital services under Part A have been made primarily for the purpose of improving the long-run financial incentives for efficient provision of care. Although one objective of the changes is cost containment, the payment policy does not provide for all savings to accrue to Medicare. Most of the payment changes proposed in the area of physician services under Part B would result in immediate savings to Medicare. By changing physicians' financial incentives to adopt and, especially, use medical technology, however, they would also affect program costs in the future.

This chapter examines methods to change the incentives for the use of medical technologies through Medicare payment for physician services. The chapter discusses physicians' influence on the use of medical technologies and analyzes several methods to enhance cost consciousness among physicians. Then it identifies possible ways that physician payment mechanisms could be used to reduce Part B costs related to the use of medical technologies.

[1]As noted in ch. 1, "medical services" is often used interchangeably with "medical technology" in this report.

PHYSICIANS AND THE USE OF MEDICAL TECHNOLOGIES

Physicians are the key determinants of the volume and kinds of medical services and technologies provided to patients. Because they control the decisions made and the resources used in providing medical services, physicians can influence the demand for their services. Thus, it is important to consider how physicians behave in their adoption[2] and use of medical technologies and how that behavior is *or* can be influenced by payment methods and programs in the health care system.

It is generally accepted that the charge-based payment system used by Medicare and other third-party payers provides financial incentives to physicians for the use of "technology-intensive" medical care, and these financial incentives exist even within a primary care field such as general internal medicine ***(295).*** Furthermore, the influence of financial incentives is supported by empirical evidence from "natural experiments'" in which physicians might be expected to respond to the imposition of restraints on payment for the care they offer by providing larger numbers of "technology-intensive" services.

One natural experiment involved the Economic Stabilization Program (ESP) put in place between ***1972*** and ***1974*** to slow the national rate of inflation. ESP imposed both general controls on price increases, including physicians' fees, and administrative controls on the amount Medicare would

[2]As noted in ch 2 there 1\ little empirical evidence related to physicians adoption 01 technologies, although it is known that physicians Inf] uence hospitals adoption decisions Thus the emph asis in this ch apter is on the use of technologies

[3]A natural experiment presents changing conditions that can help test a hypothesis

pay for physicians' services. An examination of the impact of ESP on Medicare payments to California physicians found that growth in billed charges for individual services was successfully slowed by ESP to half that of the pre-1972 rate, and that when controls were lifted in 1974, the rate of increase more than doubled. During the period that ESP was in place, however, physicians' gross payments from Medicare were largely unchanged. The reason was that physicians were able to increase the number of services they provided and to shift to a relatively higher priced mix of services ***(153).***

In the second natural experiment, between 1976 and 1977, all Colorado physicians in similar specialties were grouped together in computing prevailing charges for Medicare reimbursement. Prior to this change, similar specialties had been grouped together, but prevailing charges had been computed for 10 separate regions in the State; urban physicians had had higher prevailing charges than nonurban physicians. After the change to a single statewide prevailing charge for each specialty, urban physicians' prevailing charges were allowed to increase by less than 5 percent, while nonurban physicians had increases of about ***20*** percent. Subsequently, urban physicians provided more highly intensive services, while nonurban physicians provided less highly intensive services (275). General surgeons who had relative decreases in their reimbursement rates provided greater numbers of surgical services. Declining laboratory reimbursement rates resulted in ordering of more lab tests, and increasing reimbursement rates resulted in ordering of fewer lab tests. Radiology services were not affected ***(275).***

Excessive use of medical technologies is sometimes incorporated into medical practice through the habitual behavior of physicians and because the health care system contains few disincentives for such use. These practices continue even though the ordering physician personally may not benefit financially. Excessive use of medical technologies occurs even within the norms of medical practice and is evident across the spectrum of technologies available to physicians. Some examples follow.

Lengths of stay of patients hospitalized with the same illnesses vary widely across geographic areas, and these differences are explained neither by regional differences in age, sex, or race distribution, nor by regional differences in severity of illness ***(350),***

Between 1972 and 1977, laboratory tests nearly doubled for both hospital and ambulatory care. The costs of hospital laboratory tests increased from $2.2 billion to over $4 billion, and the number of out-of-hospital tests increased from **850** tests to ***1,510*** tests per 1,000 physician visits (134). Studies on specific tests have confirmed the intuition that much laboratory testing is unrelated to outcome and not used to assist in therapy ***(232).*** One study, for example, found a 27-percent increase in the number of laboratory tests but no decline in length of stay for patients hospitalized with diabetic ketoacidosis and pulmonary edema ***(150).*** Another study found that blood pressure control did not improve with more and costlier laboratory testing **(79).**

Laboratory tests are often ignored by the **ordering physician,** even when the tests are abnormal (90,150,427). And physicians often issue multiple orders for tests to be repeated, the results of which neither provide additional information nor are used by the ordering physician to change therapy (89,209,212,415).

Increases in the number of tests and procedures have contributed to changes in clinical practice that have raised costs ***(212,298,300).*** Showstack and colleagues ***(302)*** have suggested that increased use plateaus over time, as the use of technologies becomes relatively standardized for individual diagnoses. They therefore suggest that methods to limit increases in use may best be focused on use shortly after technologies are introduced because of the ease with which new technologies can become part of accepted practice and the expansion of the pool of patients in which certain therapies are applied.

Physicians' concerns for their patients' health can lead to physician-initiated visits. An analysis of the magnitude and determinants of physician-initiated visits **(286,426) based on a 1977-1978**

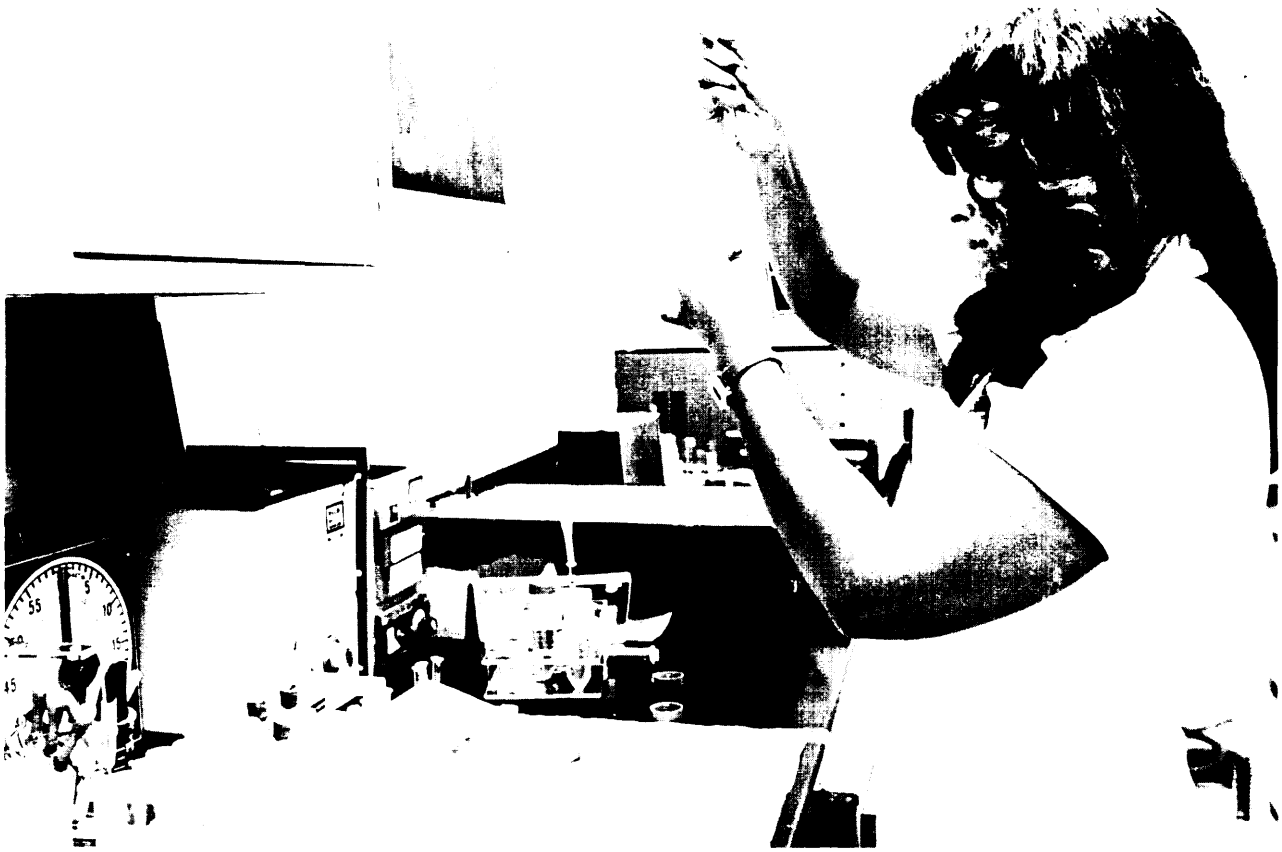

Photo credit National Kidney Foundation Washington D C

The costs of unnecessary and redundant laboratory tests, which have no effect on the type of therapy prescribed or the health outcome of the patient, have contributed to the rise in Medicare expenditures

National Medical Care Expenditure Survey found that physicians initiated 39 percent of all visits in the survey period. Physician-initiated visits increased with patient age and with poorer health status. Although most of the variations in physician-initiated demand could be attributed to medical factors, other factors were also found to influence physician-initiated visits. Greater insurance coverage increased the probability of a physician-initiated visit (but surprisingly, did not affect patient-initiated visits). Greater physician density (i. e., the physician-to-population ratio) also increased the probability of a physician-initiated visit. The analysis concluded, however, that increasing the physician-to-population ratios should not result in large increases in physician-induced demand. The probability of physician-initiated visits also increased with younger physicians, a finding that was attributed to the higher incomes and more established practices of older physicians, who have less financial incentive to initiate visits. The substantial numbers of new, younger physicians expected to enter practice in the coming years, the analysis concluded, may have only temporary impacts on physician-induced demand.

Physicians may also alter their medical practices and change their patterns of technology use because they believe patients may sue them for malpractice if harmed. Thus, defensive medicine can lead to patterns of technology use that increase costs, Two major types of physician behavior have been identified as defensive medicine. The most common type is known as positive defensive medicine and includes such actions as ordering extra tests and procedures, scheduling more followup visits, using more consultations

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and referring more patients to specialists, telling patients more about risks of procedures or tests, using more consent forms, and hospitalizing more patients **(254). Less common is negative defensive medicine, which consists mainly of underutilizing** technologies, i.e., not performing certain tests and procedures because of possible risks to the patient, thus forestalling legal actions **(370). Another behavior that would fit this category would be the refusal to treat certain patients because of the physician's belief that they may be litigious.**

Identifying or measuring defensive medicine is difficult, in part because individual physician decisions may be considered either customary medical practice or defensive medicine, depending on the motives for those decisions. Whether the use of individual tests or procedures constitutes defensive medicine depends on how physicians interpret their reasons for making specific decisions. Not surprisingly, physicians do not always identify (nor do they try to identify) all the components in each clinical decision they make. Some physicians use the information on sensitivity and specificity of diagnostic tests, the prevalence of a particular disease, and other objective information before ordering tests for their patients (101,323). Some physicians consider cost in their decisions. Even physicians who use explicit decisionmaking criteria may not be able to identify the subconscious processes that may modify or override their conscious decision processes. The inability of physicians to specify their reasons for clinical decisions in all cases magnifies the problem of determining which decisions should be classified as defensive medicine.

Published data on the total cost of defensive medicine in the United States are sparse and poorly documented. Estimates of the annual national bill for defensive medicine range from $1.5 billion to ***$8*** billion ***(239).*** None of the published estimates refers to a source for these figures.

Evidence of defensive medicine has been based on opinion surveys of physicians, which are necessarily subjective. One early survey concluded that defensive medicine is more likely to ***reduce*** than to ***increase*** use of medical technologies (165). Another survey found that fear of malpractice does influence physicians' clinical decisions, especially where positive defensive medicine was used. This study also found that defensive medicine is not practiced extensively (94), a finding which seems to conflict with the results of a survey of a random national sample of more than 4,000 practicing physicians (254). In the survey of 4,000 physicians, 35 percent of the surveyed physicians responded to questions regarding 15 specified practice changes. When asked whether concern over legal liability had induced any of these changes, more than 80 percent checked at least one. For example, 48 percent of the physicians who responded to the survey indicated that they ordered more diagnostic tests, citing fear of malpractice as the reason. Thus, the extent and effects of defensive medicine remain speculative.

METHODS OF ENHANCING COST CONSCIOUSNESS AMONG PHYSICIANS

Several methods of enhancing physicians' awareness of cost-raising behavior have been used selectively in the past and continue to be suggested by policy makers. These methods include education programs, utilization review programs, and second surgical opinion programs. Physician education programs have not been particularly effective in encouraging cost-conscious behavior. Unfortunately, although cost-conscious behavior may have occurred during and immediately following physician participation in education programs, the effect has been quickly lost. Mandatory peer review programs have decreased inappropriate hospital admissions and lengths of stay, but have not been successful in addressing excessive use of tests and procedures. Furthermore, the costs of administering these programs may have exceeded the savings that resulted from them. At a more limited level of peer review, second surgical opinion programs have had an

impact on decreasing elective surgical rates, but only when the program has been mandatory, not voluntary.

Physician Education Programs

In ***1978,*** the Association of American Medical Colleges (AAMC) surveyed 119 U.S. medical schools and found that over one-third of them had or had planned programs for teaching health care cost containment to undergraduate students, residents in postgraduate training, or both (175). The 1982-83 AAMC Curriculum Directory, however, lists only 15 medical schools that offered electives in cost containment.

Curriculum development for cost-containment education in medical schools has been suggested by various authors. Some authors have suggested a preclinical and clinical curriculum that would attempt to make physicians aware of the economic consequences of their decisions to use medical technologies, while at the same time assuring quality of care (264). Others have suggested that misuse of tests might be decreased through more medical school courses in microbiology, principles of decisionmaking, cost effectiveness, bioethics, and health economics (101,149). Not only improved physician education, but better incentives for appropriate use of tests and more selective use of automated technology for tests have also been recommended (149). It is important to stress, however, that although these recommendations appear reasonable, they are not founded on actual evidence of effectiveness.

When physicians begin ordering tests and procedures during clinical training, they do not necessarily behave according to their knowledge (144, 232). Attitudes and personality traits are important factors in physicians' clinical decisions. Physician attitudes toward preventive medicine, for example, may be more important than factual knowledge ***(67).***

Several studies have reported a tendency for physicians to underestimate rather than overestimate costs ***(93,306).*** Furthermore, the impact of information about costs on physicians' behavior has been mixed. In one experiment, it was found that providing cost information to physicians led to an average reduction in the total cost of tests ordered per patient of almost one-third (78), In another study, two groups of physicians received feedback on costs of X-ray tests and two other groups received information on costs of laboratory tests. X-ray use stayed about the same for all four groups, but laboratory use decreased for the groups receiving feedback on lab tests (66). Peer review feedback alone might not ensure reductions in test usage ***(66).*** Long-range results of peer review feedback have also been questionable. Short-term changes in physician test ordering behavior have been demonstrated but have not persisted over the long term (197).

Utilization Review Programs

The purpose of utilization review is to ensure that patients receive appropriate medical services that range from specific diagnostic tests to hospital admission. Since physicians admit and discharge patients and provide and order other medical services, review processes are expected to **have** an impact *on* their behavior. The most relevant review programs for Medicare have been the Professional Standards Review Organizations (PSROs).

PSROs, established under the Social Security Amendments of 1972 (Public Law 92-603), were areawide groupings of practicing physicians responsible for reviewing institutional services provided and paid for by Medicare and Medicaid. The purpose of their review was to help ensure that these services were: 1) medically necessary, 2) of a quality that met locally determined professional standards, and 3) provided at the most economical level consistent with quality of care (359). Thus, quality assurance and cost containment were the two purposes of the PSRO program (140,167,313).

PSROs were to accomplish these goals by conducting the following types of evaluations in inpatient hospital settings, long-term care facilities, and ambulatory care settings: 1) utilization review, 2) medical care evaluations, and 3) profile analyses, Utilization reviews were reviews of the necessity of each hospital admission and length of stay. Medical care evaluations were usually audits of patient records to monitor the appro-

privateness of tests, drugs, and procedures administered to patients, according to locally established criteria. Profile analyses were reviews of patterns of care to identify potential problems. They were intended to assist hospitals in focusing the utilization review and medical care evaluations on their specific problems.

Procedures for the three types of PSRO evaluations were developed in the order listed. By 1980, however, most PSROs had worked mainly with review of inpatient care at short-stay hospitals; they had not worked much with care in long-term care facilities or ambulatory **care** settings. PSROs could penalize hospitals by withholding Medicare payments, but they have not penalized physicians directly, other than through occasional peer pressure.

The PSRO program was evaluated by the Health Care Financing Administration (HCFA), the General Accounting Office (GAO), and the Congressional Budget Office (CBO). The basic question underlying all three organizations' studies was whether the PSRO program paid for itself. HCFA reported that utilization review in the Medicare program paid for itself in 1977, but the number of hospital days saved per 1,000 Medicare beneficiaries by different PSROs ranged from an 8.75-percent decline to a 1.95-percent increase (365), In 1979, HCFA compared geographic areas with and without PSROs and found a 1.7-percent reduction in days of care in the areas with active review (374). Physician cooperation differed among the regions with and without PSROs, so review was probably not the only cause of the difference. Using the same data but different assumptions and measures of effectiveness, both GAO and CBO disagreed with HCFA's findings and found the savings highly questionable (328, 329,334), HCFA maintained that the appropriate measure was the ratio of reimbursement savings to total program cost, which it calculated to be 1.27 to 1. CBO maintained that the proper measure should have been resource savings instead of reimbursement savings, used different estimates of the effect of PSROs on utilization, made different assumptions on savings on ancillary services, and adjusted the per diem rate used in calculating reimbursement savings. According to CBO, the resource-savings-to-cost ratio was **0.4** to 1. Even if the ratio of reimbursement savings to total program costs were used, however, CBO's ratio ***(0.9*** to 1) was lower than HCFA's because of the different assumptions used (329).

Others have criticized using the costs saved per patient day (even when average variable costs per day were used) instead of marginal costs as the measure of success (50,60). Still others have criticized cost-benefit analyses that compared total costs of the PSRO program with the marginal benefits of PSRO review over claims review by intermediaries (313). In addition, the use and cost of alternative forms of care for patients with shorter lengths of stay are usually ignored in analyses (60). Yet another problem is the fact that quality improvements resulting from PSRO review activities were not measured and considered in the evaluations (202), although HCFA did distribute a quality review studies policy to PSROs in 1980 (376).

More specific evaluations of individual PSROs and PSRO-type organizations were conducted in many parts of the country (50,98). The studies reported little or no cost savings, and in those studies where cost effects were observed, no control groups had been assigned, so the cause of any cost savings found could not be conclusively attributed to the review programs (60,98). In one hospital study, while length of stay and average charges per patient generally decreased following institution of PSRO review, the decrease did not result in overall cost savings to Medicare and Medicaid (425).

Following years of budget cuts and uncertainty over their continuation, PSROs were replaced statutorily in 1982 by utilization and quality control peer review organizations (PROS) in the Tax Equity and Fiscal Responsibility Act of ***1982*** (Public Law ***97-248). The*** Social Security Amendments of 1983 (Public Law 98-21) provided funding for PROS through Part A of Medicare and made PRO contracts a condition of participation for hospital payment. PSRO areas will be consolidated into PRO regions. The PROS will be contract organizations that will set objectives to meet quality assurance and cost-containment goals at the beginning of each 2-year contract period and subsequently be evaluated on the basis of those objec-

tives. PRO functions will include review of the validity of diagnostic information provided by hospitals (Diagnosis Related Group verification); review of the completeness, adequacy, and quality of care provided to inpatients; and review of the appropriateness of hospital admissions and discharges.

Evaluations of types of utilization review other than that performed by PSROs have been attempted. Few studies of ancillary service review focus on the review's effectiveness, but several studies have shown that ancillary service review may not have the desired effect of reducing the number of tests and procedures used. One of the basic reasons for this result is that it is physicians, and not hospital administrators, who admit patients to hospitals, order diagnostic tests and therapeutic procedures for inpatients, and discharge patients from hospitals, while the financial incentives *or other* requirements are often aimed at hospital administrators. There is also wide variation in ordering of ancillary services by physicians ***(98).***

Utilization review has also been performed in nonhospital settings, although to a limited extent. Until recently, cost problems for the Medicare program were not as obvious for ambulatory services as for inpatient hospital care, because the Part B program, which covers ambulatory ***serv***ices, includes patient copayments and deductibles, PSRO demonstration projects in which ambulatory care was reviewed concentrated on the Medicaid population, for whom the Federal and State governments pay the entire ambulatory care bill. Reviews of multiple ambulatory care facilities have been inconclusive ***(252).***

Second Surgical Opinion Programs

The institution of second surgical opinion programs for elective procedures represents another approach to enhancing cost consciousness among physicians and containing costs in both private and public sector health insurance programs. Although some second surgical opinion programs maintain that their purpose is to better inform patients so that they can make appropriate decisions, the major purpose of such programs is to reduce the numbers of unnecessary surgical operations.

Insurance groups were among the first to become interested in the potential cost savings of second surgical opinion programs. Members of several unions in New York City have participated in mandatory and voluntary second opinion programs conducted by Cornell University Medical School / New York Hospital since ***1972 (123,218, 219,220,221,288).*** Several Blue Cross and Blue Shield plans have voluntary second surgical opinion programs ***(225).*** At least one commercial insurance company, The Prudential Co., has used a mandatory program (4), In addition, six State Medicaid programs (Massachusetts, Michigan, Missouri, New Jersey, Washington, and Wisconsin) use second surgical opinion programs to control costs ***(281). The*** Medicare program itself has experimented with voluntary second surgical opinion demonstration projects in Detroit and New York City (127).

Although second surgical opinion programs differ in detail, they can be best distinguished by their mandatory or voluntary nature. Mandatory programs generally require patients to consult with a board-certified surgeon, often from a panel designated by the third-party payer, before elective surgery. If patients do not seek second opinions, they may not receive insurance benefits for those procedures (in some programs, however, patients still retain the right to receive insurance benefits for the surgery even if the second opinion contradicts the original recommendation for surgery). Consultation fees are usually covered by the payer when the second opinions are mandatory. Mandatory programs have averaged ***18*** to ***20*** percent nonconfirmed opinions (225).

Voluntary programs make available lists of board-certified surgeons but do not require consultation in order for patients to receive reimbursement for surgical procedures. Sometimes these programs will make the appointments for the patients' second opinion consultations, and they, too, usually cover the consultant's fees. Few patients (about 2 percent) participate in these voluntary programs. Those who do are a self-selected sample and are not necessarily representative of the group. Not surprisingly, patients in voluntary programs get more nonconfirrning second opinions than do patients in mandatory programs. The national average nonconfirmation rate

in Blue Cross and Blue Shield plans' voluntary program was 30 percent and one Ohio plan had a 42-percent nonconfirmation rate (225),

HCFA has sponsoreci demonstration projects to test whether Medicare beneficiaries would use a voluntary second opinion program if they did not have to pay any out--of-pocket expenses, Two sites were chosen, and contracts were awarded to Blue Cross and Blue Shield of Michigan and of Greater New York. Both of these projects began in 1978 and ran for 3 years, Participation rates were very low. In New York, 1.2 percent of Medicare beneficiaries who had surgery participated; in Michigan, 0.3 percent participated, HCFA estimated that the maximum reduction in surgery rates was 12 percent, and with the low participation rates, the maximum reduction in the number of surgical procedures would be less than ***0.5*** percent for Medicare beneficiaries (127).

Mandatory second surgical opinion programs have usually been found to have greater cost savings than expenditures. In a study at Cornell/New York Hospital, ***$2.63*** **was** saved for each $1.00 spent on the program (288). The Massachusetts Medicaid program has been estimated to save $3.90 for each $1.00 spent, including the "sentinel" effect (the change in frequency of physician recommendations for surgery when they are aware that their patients will need a second opinion) (213). Another study of the Massachusetts Medicaid mandatory program, however, examined one procedure from other areas of Massachusetts and found that "speculative, simple benefit-cost analysis" yielded ratios of ***2.27,*** 1.11 and ***0.79,*** depending on the assumptions made and not including the sentinel effect (133).

Voluntary programs, on the other hand, have high administrative costs relative to the low participation rates. Even though nonconfirmation rates are higher in voluntary programs, there is little potential for savings because of the low numbers of patients getting second opinions.

The use of second opinion programs, although assumed to decrease surgical rates, might increase them, Researchers in both mandatory and voluntary programs have indicated that patients tend to follow the second opinion consultant's recommendation (127,218). Since confirming second opinions outnumber nonconforming second opinions, some of the patients with confirming opinions might decide in favor of surgery they might not have had without the second opinion (48).

CHANGES IN PHYSICIAN PAYMENT

The use of Medicare's physician payment method to contain Part B costs related to medical technology adoption and use consists of two approaches:

- imposing restraints on the amount and changing the method of payment to physicians, and
- requiring Medicare beneficiaries to assume more responsibility for their health care costs, either through increases in patient cost-sharing or reductions in the types of benefits covered.

Although either approach could result in cost savings for the Medicare program, each would have different effects on the use of medical technologies and on access to medical care by Medicare beneficiaries.

Changes in the Amount and Methods of Physician Payment

Restricting payment to physicians means the adoption of fee schedules or similar restrictions on the level of payment physicians will receive from Medicare. The inflationary nature of the "reasonable charge" criterion by which physicians are reimbursed by Medicare has been dampened somewhat by the imposition of the Medicare Economic Index, which limits the rate of increase in physicians' fees to the rate of increase in their costs (see ch. 2). Further controls on physician payment, such as indexing fee increases to the Consumer Price Index (CPI) or developing a system of fee schedules, would help to **save** some program costs and are discussed below. Such changes, however, would leave three problems un-

addressed: 1) as long as Medicare's voluntary assignment policy continues, physicians can attempt to recoup their unreimbursed charges from patients: 2) because physicians would still determine the price they will charge (as opposed to what portion of that price Medicare will pay) and because no rational mechanism to set prices for new procedures exists, inflation in medical prices will continue; and 3) even if physician payment is limited, physicians may create demand for their services. Currently, physicians can respond to a reduction in the amount that Medicare will pay by refusing to accept assignment. If a physician refuses assignment, Medicare reimburses the beneficiary rather than paying the physician directly, but the physician can still anticipate payment.

Limits on Reasonable Charges

To slow growth in reasonable charges for physicians' services, indexes other than the Medicare Economic Index could be used. One of these is the CPI, which is projected to grow at a lower rate than the Medicare Economic Index (330). Reasonable charge levels could also be frozen temporarily and, or limited to modest yearly percent increases ***(412).***

Reasonable charges could also be selectively reduced. Hourly reimbursement rates in ***1978,*** for example, after standardization for variations in the complexit, of different procedures, ranged from $40 for a general practitioner to $200 for surgical specialists (174). Thus, allowed charges for surgical procedures might be reduced by a specified percentage (e.g., 10 percent) (330).

Fee Schedules

Fee schedules are set amounts of payment for particular services. Indeed, indexing the growth in reasonable charges to the Medicare Economic Index is slowly leading to a de facto fee schedule, but the base rate upon which allowable increases are calculated retains the historical specialty and geographic differences in fee levels that have developed under the current system of payment. Fee schedules could be constrained on this historical basis of current fee levels or recalibrated on the basis of costs. Historical fee levels for existing technologies and services could be retained-with controls on future increases—and cost-based fee levels developed for new technologies and services as they are adopted and disseminated. But putting new procedures on a cost basis and leaving old procedures on a fee basis might encourage retention of older, less effective technologies.

The adoption of fee schedules to achieve limited cost containment and provide incentives for appropriate technology use within the confines (>f the Part B program could be approached in a number of ways.

First, de facto fee schedules could occur by simply freezing current allowed charges, by continuing use of the Medicare Economic Index, by replacing the Medicare Economic Index with a less inflationary index such as the CPI or by imposing arbitrary limits (e. g., 5 percent) on the growth of reasonable charges.

Second, selected specialties could be targeted for fee schedules, such as by imposing a lo-percent reduction in fees for surgical procedures (330). Alternatively, fee schedules could also be selectively or incrementally applied, perhaps starting with inpatient surgical services (330), which comprise about ***25*** percent of physician payment under Part B (222). Inpatient surgical services would also be a logical starting point to complement the Diag nosis Related Group (DRG) system of payment for hospital care under Part A.

Another possibility y relates to ways to encourage higher assignment rates without increasing costs. A study of changes in Medicare reimbursement rates and their relationship to changes in assignment rates has led to the suggestion that increasing reimbursement for medical services would lead to an increase in assignment rates, but that decreasing reimbursement rates for surgical, laboratory, and radiological services would not lead to significant decreases in assignment rates ***(276),*** The existing fee and price system provides financial incentives for the use of "technology-intensive" medical care ***(295).*** Still another possibility, therefore, is to initiate movement toward an overall review of the relative values of all procedures and revision of the fee system, to value "cognitive" services more equally with technology-intensive services.

Third, fee schedules could be more broadly applied, for example, in the conversion of physician payment to a parallel DRGbased system. This approach could be limited to inpatient and a few other (e. g., skilled nursing facility) physician services only, extended to ambulatory care for DRG-related services, or extended to all physicians' services. In other words, physician payment could be included in the current DRG system for inpatient care, or a fee schedule might be devised that would consist of capitated payments for all services associated with a particular diagnosis.

Whatever the approach to fee schedules, administrative changes in the coding system that would have to precede specific changes in methods of payment may of themselves lead to significant cost savings, whether or not they are subsequently used to implement fee schedule changes. The ease with which physicians can use medical technologies is in part a function of the present coding system that is used by Medicare to identify and pay for medical services. That coding system has developed in part in response to the payment policies implemented under the Medicare program.

Procedure codes are used to determine Medicare's reasonable charges. At Medicare's inception, Medicare providers could use any coding system on their Part B claims and could change codes at any time. In 1979, providers were required to continue with whatever coding system they were then using. Providers were subsequently required to use a standardized coding **scheme** for Part B, the HCFA Common Procedure Coding System (HCPCS), which all providers are required to use by the end of fiscal year 1985. In HCPCS, coding for physicians' services is identical to the American Medical Association's Current Procedural Terminology, 4th Edition (CPT4). The CPT4 code is augmented with compatible codes for nonphysician services, such as laboratory services, radiology services, durable medical equipment, orthodontic services, chiropractic services, and dental services. Coding for Part B remains completely different from Part A coding, as hospitals have been using the International Classification of Diseases (ICDA, Adapted for use in the United States), which they consider more appropriate for hospitals (19).

In 1966, at the time of the implementation of Medicare, the first Current Procedural Terminology (CPT1) contained 2,084 separate procedures. By 1969, the second edition (CPT2) contained ***3,440,*** up ***65*** percent; and by 1977, CPT4 contained 6,132 procedures, an increase of 78 percent over the 1969 edition and an increase of almost 200 percent in 10 years (228).

The large numbers of procedures from which to choose not only make it easier for physicians to bill for their more expensive services, but also increase the possibility that physicians will inadvertently bill for the wrong procedures. Thus, for example, in an analysis of two types of operations performed on Medicare patients—cholecystectomy (removal of the gallbladder) and total hip replacement—it was found that different members of the surgical team frequently billed for entirely different operations. The chief surgeon and the assisting surgeon billed for entirely different operations 19 percent of the time. The surgeon and anesthesiologist disagreed even more, in 40 percent of the gallbladder operations and in 55 percent of the total hip replacements (228).

Similar problems have been found with hospital discharge data. In two studies of the reliability of hospital discharge data (236,237), two types of data discrepancies were found: 1) "ordering" discrepancies, reflecting problems in determining which of several diagnoses or procedures should be regarded as the principal one, and 2) coding discrepancies, reflecting errors in assigning a diagnosis or procedure code number. As a result, the discharge data were reliable in only ***66.8*** to 77.5 percent of the cases in the first study (236), and in only 59.1 to 64.1 percent of the cases in the second study, which examined data on Medicare beneficiaries (237). Ln both studies, the correct diagnostic code was a matter of judgment in about 5 percent of the cases. And in the Medicare study, in 70 percent of the cases in which discrepancies were found, the data on principal diagnosis included in the Medicare claim did not accurately reflect the patient's condition.

Several groups of physicians have made attempts to create coding systems for common diagnoses encountered in office-based practice. These

include the United States Modification of the Royal College of General Practitioners Classification (567 categories), the Canadian Modification of the International Classification of Health Problems in Primary Care (ICHPPC) ***(371*** categories), and ICHPPC-2 (362 categories) (294).

Thus, it appears that proliferation of codes and their categories satisfies neither physicians nor those concerned with the use of these codes for payment and other purposes. A smaller number of billing packages could be constructed—num - bering in the hundreds, not in the thousands, and perhaps mirroring hospital-based DRGs—which would bear a more reasonable relationship to the services actually provided by physicians.

Repackaging of physicians' services could concentrate on office visit and special procedure packages. Office visit packages could combine visits and ancillary tests instead of paying for them separately. Present codes could be collapsed for surgical procedures as well as for office visits, and an all-inclusive bill submitted by one physician (e.g., the chief surgeon) could avoid the problem of inconsistent billing by members of the surgical team ***(228).***

Special procedure packages, the inpatient analog to office visit packages, could be defined narrowly to include just specialist services or broadly to include all inpatient and nursing home costs as well. The more narrow packages for special procedures, a more feasible starting point, could be used to group all inpatient physicians' services, i.e., not only specialist services but also services provided by the patient's primary physician for inpatient care (228).

Assignment

Physicians at present can decide whether to accept assignment on a claim-by-claim basis. When physicians refuse assignment, they are released from their obligation not to demand the difference between their billed and allowed charges from their Medicare patients.

Assignment rates fell from a high of about 60 percent of claims in the early years of Medicare to approximatel, ***50*** percent in the mid-1970's and have remained near ***50*** percent since then (80,118). These rates include claims from beneficiaries receiving both Medicare and Medicaid benefits for whom assignment is mandatory and who comprise about 10 percent of the total. Thus, the assignment rate for services where physicians have discretion in accepting assignment is about ***40*** percent.

Assignment rates vary greatly by State, from a high of 83.9 percent of services for the aged in Rhode Island, to a low of 19.7 percent in Oregon in ***1978 (222).*** Assignment rates also vary by medical specialty. The highest assignment rates (about ***60*** percent) are in the hospital-based specialties of pathology and radiology (222). This situation may change, however, because pathologists and radiologists are now paid ***80*** percent of reasonable charges (until ***1983,*** they received 100 percent),

As long as Medicare pays for nonassigned care, cost shifting to patients is likely to occur, because physicians can attempt to collect the unreimbursed portion of their bills from their patients. There are several possible methods of penalizing physicians for not accepting assignment. One option is for Medicare to institute a mandatory assignment policy in which no payment would be made for nonassigned care ***(228).*** A mandatory assignment policy would solve the problem of cost shifting to beneficiaries, but at issue is whether a substantial number of physicians currently treating Medicare patients would refuse to participate under mandatory assignment.

In a 1976 national survey, over two-thirds of primary care specialty physicians indicated that they would take no Medicare patients on assignment if assignment were mandatory. The greatest influence on the choice was the physician's current assignment rate—physicians with higher assignment rates were more likely to choose to accept assignment rather than not to participate. If assignment were mandatory, assignment rates were predicted to decline about 10 percent nationwide, and the total supply of assigned visits to decline by almost 6 percent, Assigned visits were predicted to increase 11 percent for general practitioners but to decrease 12 to 25 percent for general surgeons, internists, and obstetrician-gynecologists. Despite the survey results, the investigators

concluded that few physicians could probably afford to give up their Medicare clientele totally, despite their threats (228).

More recent information supports the idea that physicians would find it difficult to cease treating Medicare patients. The number of physicians who treat Medicare patients is large. In 1982, 87 percent of active physicians treated some Medicare patients, and 80 percent of these physicians accepted assignment on some of these patients (1). In a 1981 survey of physicians maintaining office practices, nearly 15 percent of their patient visits were funded by Medicare. Cardiology, internal medicine, urology, gastroenterology and several surgical subspecialties had levels of Medicare-funded visits well above the average. Moreover, while ***23*** percent of visits to all of the surveyed physicians were by patients ***65*** years and older, 47 percent of the visits to cardiologists were by patients ***65*** years and older; for internists, the figure was 41 percent; for urologists, 39 percent; and for gastroenterologists, it was 36 percent (178).

Physicians also tend to accept assignment in proportion to the size of their Medicare patients' bills, the assignment rate rising to as high as 79 percent for bills over $2,500 for internists and 73 percent for general surgeons (222). If faced with mandatory assignment, the potential loss of income from their more expensive services may be enough to offset whatever misgivings they might have over accepting assignment for all Medicare claims.

Another possible influence on assignment choices is the rapid growth in the number of physicians, largely due to Federal policies beginning about the time Medicare and Medicaid were enacted in the mid-1960's. As a result of these policies, the supply of physicians has grown much faster than the population has. There were 165.5 physicians per 100,000 population in 1974, increasing to 193.1 /100,000 in 1980, and projected at 213.8/100,000 in 1985 and 231.3/100,000 in 1990 (346). Increases in the number of physicians relative to population growth have been positively correlated with increased assignment rates among general practitioners and internists, perhaps indicating that increased competition induced physicians to accept assignment on more claims to attract patients (276).

Medicare is, therefore, already an important contributor to physicians' incomes and will become even more important to physicians' practices as the size of the aged population continues to increase. Thus, existing conditions and future trends make it likely that most physicians would continue to treat Medicare patients.

One option besides mandatory assignment is for Medicare to pay for nonassigned claims but at lesser rates. Nonassignment could be discouraged by discounting the physician's charge on nonassigned bills in addition to the 20 percent coinsurance. This could be accomplished either by reducing the allowed charges for nonassigned care or by increasing the coinsurance rate (e. g., to 50 percent) (228). A variation of this option is to allow slower growth in allowed charges for nonassigned care (330).

Changing assignment policy is closely linked to changes in physician payment. If further controls are placed on the rate of payment to physicians while assignment policy is left unchanged, it is likely that the bulk of program savings will be borne by beneficiaries if there is no change in medical technology use. Even though Medicare would reimburse the beneficiary and not pay physicians directly when the physicians refuse assignment, physicians could still anticipate payment, subject only to delayed payments and bad debts. Thus, in the absence of a change to mandatory assignment, policies aimed at physicians ultimately would be felt most by Medicare's beneficiaries.

Therefore, no matter whether program savings come initially from reduced physician payment levels or increased cost-sharing by beneficiaries, in the absence of mandatory assignment, most Medicare Part B savings will still ultimately come at the expense of beneficiaries.

Discussion of Physician Payment Changes

Policies that place further limits on Medicare's allowable charges may themselves lead to further distinctions between physicians who treat Medicare patients and those who do not. The price differential between what Medicare will pay and what physicians charge their non-Medicare patients may become large enough that many physicians may refuse to treat Medicare patients. The

alternative is that most physicians would continue to treat Medicare patients. However, most program savings would again ultimately be borne by beneficiaries, because beneficiaries would still be liable for the difference between allowed and billed charges under current assignment policy.

When any payment system is changed so that it changes the incentives to provide care, reviews of the appropriateness of the care provided are generally regarded as necessary for quality assurance. As noted earlier, most PSROs were never able to progress substantially beyond reviews of hospital admissions and continued stays, nor did they include reviews of ancillary and physicians' services (109). And review activities have not included extended-care facilities or ambulatory care. PSROs were statutorily replaced by PROS in 1982 (public Law 97-248). While it is too early to tell what kinds of review activities these new organizations will undertake, it is doubtful that many PROS will begin to review physician and ancillary services soon. Given the difficulties in assessing what is necessary medical care at the service-by-service level, it is even more doubtful that PRO reviews will be extended any time soon to ambulatory medical care.

Another possible review activity is second surgical opinions. The Inspector General of the Department of Health and Human Services recommended that HCFA initiate legislation on mandatory second surgical opinion programs for Medicare and Medicaid (44). The types of surgery for which second opinions would be mandatory would be specified, and beneficiary copayments and deductibles would be waived for the second surgical consultations. HCFA has responded that these actions would be premature because of limited research on mandatory second surgical opinion programs and because of what HCFA considers questionable cost estimates made by the Inspector General (44).

Increased Beneficiary Cost= Sharing

Cost shifting to beneficiaries is expected to give beneficiaries increased incentives to be more prudent in seeking medical care. The expectation is not only for patients to reduce their use of physicians' services (199,243,299), but also that physicians would reduce prices (307,309). Greater selectivity by patients in seeking medical care, resulting in fewer visits to physicians, it is hoped, will force physicians to compete by lowering their prices.

It is important to note that different methods of cost shifting to Medicare beneficiaries can have different effects. Increasing Part B premiums should have little or no effect on the demand for services, because the increased cost is incurred regardless of whether beneficiaries reduce their demand for services. Raising premiums is an insurance mechanism for spreading the costs across Part B's entire beneficiary population. Increasing the deductible and coinsurance, on the other hand, may reduce demand, because more costs are incurred by the beneficiary as more services are used.

In considering increases in cost-sharing by Medicare beneficiaries, it is important to recognize that the elderly already have more out-of-pocket expenses than the young. The results of ***1977*** and 1978 interviews with 14,000 households indicate that annual out-of-pocket expenses increased steadily by age, from $97/year for patients under 6 years of age, to $295/year for patients age 55 to 64, and to $326/year for those over 65 after Medicare's contribution (396).

Another important point is that the Medicare population is not homogeneous in its use of medical services. About two-thirds of elderly beneficiaries use their Part B insurance in a given year (339). But less than one-fifth of beneficiaries account for nearly 90 percent of costs, and these high users of medical services tend to remain high users over time (215). Whether these high users are consuming large amounts of unnecessary services is not known, but the answer is crucial to the question of whether increased cost-sharing would simply shift costs from the Part B program to beneficiaries, or whether it would also lead to reduction of unnecessary technology use.

Premiums

As noted in chapter 2, beneficiary expenses under Part B are premiums, deductibles, and coinsurance. At the outset of the Medicare program, premiums financed half of Part B program costs. By 1978, following amendments limiting Part B

premium increases to no more than the percentage increase in social security cash benefits, however, the percentage contribution of premiums to Part B costs had dropped below 25 percent (134). Under the Omnibus Budget Reconciliation Act of 1981 (Public Law 97-35), the limitation on Part B premium increases was suspended for a l-year period between July 1, 1983, and July 1, 1984. During this period, premiums were to be increased so that they met 25 percent of Part B costs. However, the Social Security Amendments of 1983 (Public Law 98-21) delayed the start of the suspension period to January 1, 1984. Thus, premiums rose to $13.10/month on July 1, 1983, and rose again to $14.60/month on January 1, 1984. The previous method of calculating premiums is expected to resume on January 1, 1985.

In its fiscal year 1984 budget proposals, the Reagan Administration recommended increasing premiums until they reached 35 percent of Part B program costs by 1988 (412). CBO identified two similar options: 1) increasing premiums to 30 percent of costs; or 2) limiting the premium increase to higher income elderly, with a cutoff point in income at $20,000/year (330).

Most of the elderly participants in Medicare Part B have some form of supplemental "Medigap" private insurance. In 1976, 63 percent had private insurance, and another 14 percent had Medicaid or some other public supplemental insurance (199). CBO hypothesizes that additional medical services used as the result of extra first dollar coverage by Medigap policies will cost the Medicare program $3.2 billion in 1984, most of which CBO estimates could be recovered by a 30-percent premium tax on any Medigap policy that pays any part of the first $1,000 of Medicare cost-sharing (330).

The Social Security Advisory Council to the Secretary of the Department of Health and Human Services has recommended that Part B premiums be doubled and the extra revenues be used to finance changes in Medicare's Hospital Insurance program. Under the Social Security Advisory Council's proposal, Medicare patients would have no limit on the number of days of hospital care each year after paying an initial deductible of $350 for the first day, plus a second deductible of ***$350*** if additional hospitalizations occur. [4] Out-of-pocket costs for Part B would be limited to ***$200*** per year, a limit which would decrease the demand for commercial Medigap policies, because premiums for these policies cost from $300 to $800 per year (372). For protection against the $200 deductible and for services not covered by Medicare, however, some demand for supplemental insurance should continue.

Part B premiums could be varied to reflect local costs. The reasoning follows analyses of plans for implementing a voucher system.[5] It has been proposed in those plans that the value of the voucher follow average reimbursements at the county or State level. Under such proposals, differences in the value of the voucher are meant to reduce the intermarket subsidies that result from large variations in per capita expenditures for hospital care and reimbursement for Medicare and private insurance enrollees. Otherwise, in some low cost markets, the value of the voucher would be more than current per capita reimbursement rates, and total costs would rise, If the price of health insurance were adjusted to reflect local market conditions, more competition might result ***(424).***

Following that theory, Part B premiums could be similarly adjusted, with higher premiums for areas with higher program costs. For example, because Part B participants already are subsidized by general revenues (such revenues cover 75 percent of current Part B costs), the lowest premiums could be set at the current rate. While this change would relate premium costs more closely with local medical costs, it would not be expected to lead to more competition. Beneficiaries would still have only one choice of an insurance plan and would not have the opportunity to shop among competing insurance plans as would be the case under a voucher system.

Deductibles

The current deductible, the amount Medicare beneficiaries pay before Part B insurance is ac-

[4] The purpose in requiring the second deductible is to moderate the financial incentive under DRG hospital payment to increase admissions, See ch. 6 for more information.

[5] A voucher is an entitlement of fixed value for the purchase of health insurance. For a discussion of vouchers, see ch. 8.

tivated, is $75 per year. The deductible could be indexed to the Medicare Economic Index so that the deductible would increase in pace with medical costs (412). It could, of course, be set at any other level.

Unlike the premium, the deductible is related to initial use of services. In Medicare's elderly population, however, many people have chronic diseases and require continued access to care. For such a population, the deductible may often not be a deterrent to seek care, but a financial hurdle to overcome with each new calendar year. Thus, increasing the Part B deductible would shift costs from the Medicare program to its beneficiaries and might not result in any significant reduction in the demand for medical technologies.

Coinsurance

Coinsurance raises financial barriers to the use of medical services each time such services are sought. Thus, increasing Part B coinsurance requirements might reduce demand, because costs would be related to the amount of services used. However, Part B beneficiaries already have a coinsurance requirement of 20 percent, and for nonassigned care, beneficiaries incur additional liability for the difference between allowed and billed charges. Thus, one issue is the amount of additional coinsurance requirements that might be reasonably imposed, and whether those additional beneficiary costs would be accompanied by a significant reduction in demand.

In the past, suggestions to change Medicare's coinsurance requirements have been focused on Part A, where coinsurance is currently activated only after ***60*** days of hospitalization for a particular illness. Together with the coinsurance of 20 percent of allowed charges under Part B, imposing hospital coinsurance raises concern that out-of-pocket expenses could be substantial for hospitalized beneficiaries. Thus, for example, one CBO proposal to impose hospital coinsurance for the next ***29*** days after the day of admission (on which there is a deductible equal to the average cost of 1 day's hospitalization) also includes coverage of all charges after the first 30 days and a cap of $2,000 on total out-of-pocket costs for both Parts A and B for beneficiaries with annual incomes below $20,000 (330).

Discussion of Beneficiary Cost-Sharing

Although a significant amount of cost-sharing is possible through changes in the Part B program, the likelihood of cost containment from such changes is limited at best. If significant cost containment occurs, it may come primarily at the expense of reduced access to medical care for Medicare's beneficiaries. **And while reduced access includes a reduction in the provision of excessive technology use, it also implies a reduction in the provision of necessary and appropriate medical care.**

Of the three types of direct financial liability incurred by beneficiaries participating in Part B—premiums, deductibles, and coinsurance (a fourth liability is the difference in billed and allowed charges for nonassigned care) —changes in premiums have the greatest potential for reducing Medicare program costs. The extra revenum from the Social Security Advisory Council's proposal to double Part B premiums were projected to allow unlimited hospitalization after an initial deductible for each hospitalization, as well as to limit out-of-pocket costs in Part B to $200 per year. The $200 per year limit on out-of-pocket costs, in turn, was expected to make commercial Medigap policies less attractive (372). Premiums, however, are insurance mechanisms for spreading the risk of the costs of illness, but are not particularly relevant in affecting behavior related to medical technology use. This observation is particularly applicable with respect to the Part B program, where premiums purchase a single insurance policy—i.e., beneficiaries have no choice in the types of coverage they might purchase (as they would in the case of a voucher system). Regardless of their prudence or excess in seeking medical services, beneficiaries receive no feedback in terms of the medical costs they incur. Furthermore, premiums are deducted from Medicare beneficiaries' Social Security checks before the checks are issued, so beneficiaries' awareness of the relationship between premium levels and the costs of medical care is even less than it might be otherwise.

CBO hypothesized that, of all the Medicare-specific proposals to contain program costs, a tax on premiums for supplemental Medigap insurance would result in the greatest savings (33o). Currently, all persons who purchase health insurance

enjoy a tax subsidy, and elimination of that subsidy is a crucial element of proposals to **increase competition** in health care by making consumers more cost conscious (355). Despite the economic rationale, however, proposals that increase cost-sharing for Medicare beneficiaries and that also penalize them alone for seeking additional insurance against this greater cost-sharing by taxing their supplemental policies would be widely regarded as discriminatory. Furthermore, the elderly population has greater medical needs and more out-of-pocket expenses than the younger population ***(396),*** Thus, a tax on supplemental insurance, while leaving the tax subsidy on general health insurance intact, not only would be discriminatory but also would be imposed on a class of persons who have the greatest need for medical care,

Finally, while a tax on supplemental insurance has been projected as resulting in the greatest savings of the proposals identified ***(330),*** the projected savings are also the most hypothetical. In addition to premium tax receipts, the bulk of the savings are expected from a reduction in the use of Medicare-reimbursed meclical services by beneficiaries who drop their Medigap coverage. Although such a reduction in use can be expected, quantifying the effect on the Medicare-reimbursed portion of these services is a tenuous exercise.

Deductibles and coinsurance are methods with more promise than premiums for changing physician and patient behavior and thus containing long-term Medicare costs, but even changes in these areas have limited applicability in the Part B program.

A large deductible maybe more appropriate for hospitalization than for ambulatory care, particularly for the Medicare population. Because of the higher prevalence of chronic conditions among the elderly than among the younger population, maintenance therapy for elderly people is more essential. Therefore, increasing the Part B deductible would have a predominantly cost-shifting effect without a proportional decrease in demand for services.

Coinsurance has the effect of raising financial barriers each time medical services are sought. Thus, it would have a more significant effect on the demand for ambulatory care than a deductible would. However, Medicare beneficiaries already have a 20-percent coinsurance liability under Part B, and for nonassigned care, the coinsurance is higher. Together with other out-of-pocket expenses, less than half of the health expenditures by the average elderly Medicare beneficiary was covered by Medicare Parts A and B in 1978 (203).

Substantial increases in beneficiary cost-sharing would likely come at the expense of reduced access for Medicare beneficiaries. While reduced access would be less likely or of less magnitude with incremental increases, the effect would probably be a simple shift of costs from the program to beneficiaries. This effect would occur because marginal changes in the Part B program cannot be expected to substantially alter the limited incentives for cost containment that are inherent in the Part B program.

CONCLUSIONS

Strategies for changing the incentives for physicians to provide medical technologies under Medicare's Part B have substantial limitations. These limitations fall into two categories.

First, short-term Medicare program savings can be achieved, but these savings are likely to come primarily at the expense of beneficiaries and would not necessarily reduce excessive care. If payment limitations are imposed on physicians' services, beneficiaries would be affected either indirectly through cost shifting from physicians to beneficiaries or directly through increased cost-sharing. A substantial increase in cost-sharing through increased coinsurance *might* reduce demand significantly, but two factors argue against this approach: 1) there is already a coinsurance of ***20*** percent; and 2) further significant increases

(e.g., up to 50 percent) might reduce beneficiaries' access to necessary medical care.

Even if these Medicare-specific approaches to containing Part B costs resulted in an acceptable allocation of costs between beneficiarim and physicians, the second limitation is that the gap between fees paid through Medicare and those collected from non-Medicare patients would continue to widen. In 1978, the percent reduction of the average total billed charge per service used to calculate the average Medicare-allowed charge was 20.3 percent, up from 18.7 percent just 3 years earlier in ***1975 (222).*** Further increases in the difference between billed and allowed charges, which could be expected if additional restraints were placed on physician fees under Medicare, again raises the issue of reduced access for Medicare beneficiaries. Equalizing fees for all patients would solve the access problem and could be accomplished either by raising public fees or by imposing a fee schedule on all physicians' services, public and private. Raising public fees would lead to higher charges, but fee controls alone, under the current method of billing based on existing diagnostic and procedure codes, may not be enough to control expenditures for medical technologies or to provide incentives for the provision of the most cost-effective technologies. Thus, there is still a need for methods other than changes in payment, such as utilization review to monitor and evaluate the quantity, mix, and quality of the medical technologies provided (170), or more focused reviews, such as with second surgical opinion programs.