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Chapter 7

# Access to Health Care

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# Access to Health Care<sup>1</sup>

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## INTRODUCTION

Securing access to health care for all Americans was the major goal of American health policy for several decades. Over the past few years, public concern has shifted to the soaring cost of care. Nevertheless, for many Americans, access to care is still far from satisfactory (5). Moreover, many people fear that an overly enthusiastic pursuit of cost containment may jeopardize the substantial gains made in access in previous years.

The impact of Medicare's new prospective payment system (PPS) is of particular importance, since Medicare's eligibility rules are designed to ensure access to care for three especially vulnerable groups: elderly people, disabled people, and sufferers from end-stage renal disease (323). There is concern as to whether these groups, with their special needs, will find their access to care com-

Parts of this chapter are based on a background paper entitled "Evaluating the Effects of Medicare's Prospective Payment System on Access to Health Care," which was prepared for OTA in December 1984 by Mary Ann Bailey.

promised under the new system. Subgroups of the eligible population—defined, for example, by income, place of residence, social or ethnic background, or specific health condition—could also experience special difficulties with access. In addition, since Medicare is such a large part of the market for hospital care, a change in its hospital payment methods affects the entire system. Thus, PPS could, in turn, affect access to care of those outside the system.

The purpose of this chapter is to consider how the effects of Medicare's PPS on access to health care can be evaluated and how the inherent methodological difficulties can be overcome. First, the definitions of access are discussed, and three concepts of equity of access are examined. Second, the potential impact of PPS on equity of access is explored. Then, critical questions for evaluating equity of access are presented, along with a discussion of how they can be answered and data sources.

## DEFINING AND MEASURING ACCESS TO CARE

### The Concept of Access

The expression "access to health care," like "quality of care," is ambiguous. Consequently, people can unite behind the goal of "assuring access to health care for all Americans" when their views of what access means and how equity of access should be assured are very different.

Access is defined in Webster's dictionary as "permission, liberty, or ability to enter, approach, communicate with, or pass to and from" or "freedom or ability to obtain or make use of" (386). Aday and Anderson provide the most common definition in the health care field, stating "access may be defined as those dimensions which describe the potential and actual entry of a given population group to the health care delivery system" (4).

Note that the expression is access to "health care," not access to "health." This distinction is required, because it is impossible to guarantee that a particular level of health status is achieved or maintained. Of course, when judgments are made about the adequacy of access, differences in access that can be attributed to affecting health outcomes are usually considered of greatest policy importance. Note also that the word of concern is "access" and not "distribution." Even strict egalitarians recognize that the policy goal should not be an equal distribution of health care, given the unequal distribution of health needs.

Another important conceptual distinction is that policy makers who wish to assure "access" often are actually referring to some sort of "equity of access." From a policy perspective, meas-

uring changes in access means measuring changes in equity of access, so these terms are often used interchangeably. Either term obscures very important aspects of receiving health care, e.g., how much of the cost people bear themselves and how good the quality of care is compared with other care. Since there is no consensus on the amount of care a person should be able to obtain, how "good" the care should be, or what it should cost (financial and time costs), it may well be convenient to use a term that leaves these questions open. Nevertheless, practical policy dictates that these questions be answered. How changes in equity of access to health care should be measured and evaluated depends on those answers.

### **A Need-Based Concept of Equitable Access**

The traditional health care literature on access emphasizes the relationship between what people get and what they need. In the words of Aday and Andersen (4):

One of the central issues to be addressed in any evaluation of access to medical care is whether persons who need care are able to obtain it. Equity is said to exist when services are distributed on the basis of need rather than as a result of structural or individual factors such as a family's income level, person's racial characteristics, or the distribution of physicians in an area.

"Need" is a notoriously slippery concept in health care (41,103,395). A technical definition of need emphasizes the relation between health care and health outcomes. A person "needs" the amount of health care that would bring his or her health status as close to normal as possible and keep it there (with some specified probability, since medical outcomes can never be guaranteed). Because health care resources are limited, most people would agree that stopping short of satisfying all health care needs is reasonable, even in the narrow technical sense. Need cannot be defined as all care that is of any benefit however small; some attempt must be made to consider the relationship of benefit to cost. How the limit to the satisfaction of needs should be set is debatable. And how this health care should be divided between the provision of technological services

and informing and caring is even more difficult to decide.

What is clear is that this approach to equity of access emphasizes comparison of health care utilization rates. It does not say what those rates should be or how much care should be potentially available, and it pays too little attention to the costs and quality of care received as an equity issue in itself rather than merely as a potential barrier to obtaining care. Furthermore, differences among individuals or between groups in utilization for any given health status are considered inequities (4). Labeling all such differences as inequities, however, seems excessive. If health care is bought and sold, and individual incomes and preferences differ, differences in utilization should be expected.

### **A Market Concept of Equitable Access**

A market concept of equity of access is that everyone should be able to buy the health care he or she wants at a cost that reflects the true cost to society of supplying it. If the distribution of income is fair, and if markets for health care and health insurance work well (i.e., are perfectly competitive), then access to care will be equitable. Since preferences and supply costs may vary in different parts of the country or for different groups, there may be differences in the amounts of care available for purchase and the terms on which care is available. As long as these differences represent the outcome of the interaction between consumer tastes and real supply costs, they do not constitute inequities of access.

In contrast to the needs-based approach, differences in ability to pay due to differences in income constitute neither differences nor inequities in access. If the distribution of income is very unequal, poor people may have difficulty obtaining important health care. Under this concept, however, their problem is not one of access to

<sup>2</sup> A "perfectly competitive market" is one in which large numbers of buyers and sellers operate independently for a particular product. Other factors are availability of perfect information about the product and easy entry into and exit from the market.

health care but of access to wealth, and this problem should be treated on its own.

Differences caused by imperfectly competitive markets *are* inequities under the market-based concept of access. Health care and health insurance markets are far from competitive. Consumers have inadequate information; providers are licensed; tax subsidies exist for the purchase of insurance. Thus, under this approach access is judged by whether patients with the same health status are charged different prices for the same services, whether artificial barriers exist to location of physicians in underserved areas, whether insurance companies are offering the kinds of policies consumers want to buy, and so on.

The market approach answers the “quantity,” “quality,” and “costs to patient” questions of access by referring to an unobservable ideal—the result a perfectly competitive market system would yield. More important, this approach fails to incorporate the widely held belief that health care is “special,” and ability to pay should play a different role in the distribution of health care than it does in the distribution of other commodities.

### **An Adequate Care Concept of Equitable Access**

An intermediate position between the need-based and market concepts of access holds that equity of access to care means everyone should be able to obtain an “adequate level” (or “decent minimum”) of care, without having to bear an “excessive burden” in travel, waiting time, or financial cost (49,234). People who want more than this level of care should be able to purchase it at its unsubsidized supply cost.

The precise content of an adequate level of care and the definition of an excessive burden are value judgments. They depend, first, on society’s tradeoffs between health care and other commodities and, second, on tradeoffs among the different kinds of health care.

An adequate level of care also depends on the relationship between health care and health status. Thus, this approach gives highest priority to measuring shortfalls between adequate care for a given health status and actual utilization. The

presumption is that people will choose to consume at least the adequate level, whatever their preferences, if no excessive financial burden serves as a barrier. Above the adequate level, however, differences in utilization are to be expected and are equitable if they reflect preferences, incomes, and social costs.

Two approximations of adequacy of care in empirical studies of access are: 1) professionally defined standards of needed care; and 2) the care received by the average middle class American. Neither is fully satisfactory. Standards developed from professional judgments can be overly lavish and biased toward a technical definition of need, and the pattern of care now received by middle class Americans is distorted by a third-party payment system characterized by perverse incentives (234). Thus, although this approach to access is attractive, there are practical difficulties in applying it.

### **Implications for Measuring Access**

As noted earlier, the ultimate purpose of evaluating PPS-related changes in access is to enable judgments to be made about their policy significance—whether the changes have a positive or negative impact on equity and to what extent. As the above discussion shows, there is no consensus on what constitutes equity of access, and the three definitions attach very different importance to observed differences in the kinds and amounts of health care obtained or the terms on which it is obtained.

Nevertheless, all three concepts of equity imply that it is changes in the availability and utilization of services that are the important indicators of changes in access for specific groups. Thus, all three concepts point to measures of potential and realized access, although the division is not absolute. Potential access refers to the possibility of obtaining care if the need or desire for it arises. Realized access refers to the actual utilization of care in response to need or desire (4). The concepts also imply that changes in out-of-pocket costs of care to patients may be important indicators of access, but these issues are more fully addressed in chapter 5. Differences among groups in availability or utilization that cannot be explained by differences in health status are particularly suspect,

## POTENTIAL IMPACTS OF PPS ON ACCESS TO CARE

PPS will affect access to the full array of health services, because markets for different kinds of health care are interconnected. For example, changes in hospital incentives to admit and discharge elderly patients will affect nursing homes and home health agencies. These effects will probably spread beyond the Medicare population to the non-Medicare population, but perhaps in different directions. Brief discussions of PPS effects on access to other sites of care, including ambulatory and posthospital care, as well as effects on the Medicaid and veteran populations, are included below. The emphasis in this chapter, however, is on PPS effects on equity of access to hospital inpatient care.

### Access to Inpatient Care

PPS may affect access to inpatient care in four ways:

- through effects on the number and distribution of hospital beds;
- through effects on the admissions policies of hospitals;
- through effects on the transfer policies of hospitals; and
- through effects on treatment received after admission to the hospital.

The most important aspect of these effects is their differential impacts on different groups of patients, especially vulnerable groups. The groups most often identified as vulnerable include frail elderly patients (especially those over 75), disabled patients, and alcoholic and mentally ill patients. These groups are discussed further below.

### Availability of Hospital Beds

PPS may systematically alter the number and the distribution of hospitals and hospital beds by geographic location, size, and type of population served. In the short run, the total amount of Medicare payments going to hospitals will not necessarily decrease very much, and some observers have predicted the amount will actually increase. However, the distribution of Medicare payments to hospitals may change substantially (see ch. 3),

and in the long run, the increase in total payments is likely to be slower.

Changes in the patterns of Medicare payments will put serious financial pressure on many hospitals and may affect the total *number of hospital beds*: some hospitals will close; others will reduce bed capacity. Hospital occupancy rates at the moment are low—estimated at 73.4 percent in 1983 for non-Federal, short-term general hospitals (13)—suggesting the existence of excess capacity. Since PPS is intended to encourage efficiency, closures may be desirable if the least efficient or least needed hospitals close. However, the systematic revenue redistributions among hospitals implied by PPS suggests that financial pressure may be tied to factors other than relative efficiency (288,295,369). Furthermore, even the closure of inefficient hospitals or hospital beds may affect access to care for specific vulnerable groups.

In addition to the total number of beds, the *geographic distribution of facilities* may change. When Medicare's PPS system is fully implemented, it will pay the same rate per diagnosis-related groups (DRG) throughout the country, adjusting payment only for whether the hospital is in a rural or urban location.<sup>3</sup> Preliminary simulations by the Congressional Budget Office (CBO) of the impact of PPS on individual hospitals (assuming no change in hospital behavior) indicate that in general, hospitals in the South and Northeast regions will gain substantial revenue under PPS, while those in the West and North Central regions will tend to lose (295). On average, rural hospitals are expected to do worse under PPS than urban hospitals.

The *size distribution* of hospitals also may change. Small hospitals (those with fewer than 75 beds) in rural areas play a special role in access, since they are often the only providers within easy reach of rural populations. Small hospitals could have problems under PPS, because they have

<sup>3</sup>A number of observers believe that efforts on behalf of the hospital industry to freeze the implementation of the PPS system to include permanent regional rates may be successful.

higher fluctuations of census, and many serve high proportions of Medicare patients. Moreover, in small hospitals, the cost of administration and the variability of cost of treating patients within a DRG are spread over a small number of patients. However, many of these hospitals will generally not be adversely affected by PPS if they are the “sole providers” in their communities. Such “sole providers” receive help from the provision allowing special exceptions or adjustments to PPS rates.<sup>4</sup>

*Hospitals that serve a disproportionate share of low-income patients* may have special problems. The burden of providing care to low-income persons is not distributed evenly across hospitals. Certain hospitals, including inner-city and rural public hospitals and university and large city teaching hospitals, have a much greater than average proportion of Medicaid and charity patients in their patient population (180). If these hospitals are “losers” under PPS, the consequences for access to care for the low-income group could be severe. CBO estimates indicate that these hospitals may indeed lose under PPS unless substantial changes in hospital behavior take place (294). The potentially most severely affected disproportionate share providers are those that are *not* major teaching institutions (i. e., those with fewer than 0.25 residents per bed). As a group, urban, Government-owned teaching hospitals that serve poor people are likely to receive increased revenues under PPS (307), primarily because of the adjustment for indirect teaching costs. If this adjustment were reduced to the level that prevailed prior to PPS and treatment patterns remain unchanged, these hospitals would become losers as well.

### Admissions Policies of Hospitals

The incentive not to admit patients who cannot pay already exists for hospitals, but to the extent that Medicare’s PPS increases the financial pressure on the hospital sector, financial disincentives to provide charity care will increase. Among

patients for whom at least some payment is made, the incentive is for the hospital to admit any patient for whom payment exceeds the marginal cost of treatment.<sup>5</sup> In States where Medicaid reimburses hospitals at lower rates than other third-party payers, for example, hospitals have an incentive to avoid Medicaid patients altogether if occupancy rates are high enough without them, or if reimbursement is less than the marginal cost of treatment.

Under PPS, there is a danger that Medicare patients will become less financially attractive as a group than patients covered by payers who reimburse on a more generous basis. Thus, Medicare patients may take the second to last position in the line, just in front of Medicaid patients. However, because DRG rates currently cover marginal costs for most patients within a DRG, and occupancy rates are generally low, Medicare patients as a group are likely to remain attractive to hospitals.

PPS may create financial incentives to hospitals simply to stop treating certain DRGs or certain patients within a given DRG. In the short run, DRG reimbursement rates are probably greater than marginal cost for all DRGs, so there is an incentive to treat all DRGs. In the long run, however, when capacity can be adjusted, specializing in certain DRGs and avoiding others will be advantageous, especially if profitability differs by DRG. To date, no DRGs have been identified as clearly unprofitable for all hospitals in the long run; as cost accounting systems improve, this may change (162). It is especially likely if the system for altering DRG rates is slow to respond to changes in medical technology and input costs.<sup>6</sup>

Although no specific DRGs have been identified as unprofitable, there are several groups of Medicare beneficiaries that can be identified as especially vulnerable to problems with access to hospital care. These groups cut across DRGs and include patients in whom physical illness is accompanied by alcoholism or mental illness, dis-

<sup>4</sup>Over 300 hospitals qualify as sole community hospitals at this time (159). A recent study by the National Center for Health Services Research (NCHSR) found that sole community hospitals differed from other rural hospitals by having a greater bed capacity and a greater range of facilities to maintain.

<sup>5</sup>Marginal cost is the additional or variable cost the hospital incurs as a result of accepting the patient over and above what it would otherwise spend.

<sup>6</sup>For example, new advances in lens implants for cataracts provide greater patient benefits but at costs that may make the DRG payment for the procedure unprofitable (see ch. 8) in some hospitals.

abled patients, and very old or frail elderly patients. For example, many elderly patients have multiple medical problems that result in a greater severity of illness than that covered by the DRG payment in many categories. Because "age over 70" or "substantial comorbidities or complications" were the bases for establishing separate DRGs, a number of DRGs have the potential to systematically undercompensate for the frail elderly (30). Box 7-A illustrates some of the problems for alcoholic and mentally ill patients.

### Transfer Policies of Hospitals

Transfers, or the change of hospitals after a patient has already been admitted, may present a special access problem, sometimes known as "dumping." "Dumping" refers to the practice of getting rid of unprofitable patients for economic reasons. Once a patient is identified as unprofitable, there is a financial incentive to transfer the patient to another hospital, since the initial hospital receives a per diem payment for the time it has the patient and avoids further losses (the receiving hospital gets the DRG payment for the whole stay). If the receiving hospital is actually a more appropriate source of care for the patient and if the transfer process itself has no adverse consequences, access and quality of care for that patient could be improved. But the hospital has a financial incentive to "dump" patients even when it is not in their best interest.

Patients in the vulnerable groups already identified (e. g., alcoholic and mentally ill patients—see box 7-A) along with racial minorities are particularly vulnerable to "dumping" (133). Veterans Administration (VA) and public hospitals are the likely recipients. Yet these hospitals, along with inner-city teaching hospitals, already provide a substantial amount of undercompensated care. These hospitals may then have more difficulty financing undercompensated care and may have fewer resources to maintain the level of quality that they provide to the rest of their patients.

Transfers and admissions are clinical decisions by doctors; they can be controlled by the hospital administration only to a limited degree. The selective transfer or admission of particular patients also presupposes that unprofitable patients

can be readily identified at admission or early in the course of a hospital stay, which generally may not be the case. The hospital administration has more control in decisions about whether or not to stop treating certain DRGs. But on these decisions, there are market constraints. The hospital may need to maintain a full line of services in order to retain its medical staff and its position in the market.

### Treatment Policies in Hospitals

The incentives provided by PPS can affect access to care even after patients are admitted to hospitals. One important incentive is for hospitals to specialize in particular DRGs. The other significant incentive is to treat different groups of patients differently. These problems are discussed further below.

If hospitals specialize in particular DRGs, access may be affected either positively or negatively. To the extent that specialization concentrates care for specific DRGs with the most efficient providers, it may reduce costs without impairing quality. For example, open-heart surgery is said to be both cheaper and better when it is done in a hospital that does a high volume of such surgery (189). Concentrating specialized care (including intensive care units, burn units, and other special equipment) in a smaller number of hospitals could, however, increase patient travel time and distance for some patients to an unacceptable degree.

To the extent that specialization in particular DRGs or in particular types of patients within DRGs occurs because unprofitable patients are concentrated in hospitals that are least able to avoid them, the implications for access are more serious. If the DRG rate of payment is too low for a subgroup of patients so that no provider, however efficient, can make a reasonable return on them over the long run, not only will the patients have difficulty finding hospitals that will treat them, but the hospitals they find will be financially pressed as a result.

Differential treatment of patients according to source of reimbursement may be a problem, although there are several constraints to the problem becoming too great. Historically, many hos-

### Box 7-A—Access to Hospital Care for Vulnerable Groups: Alcoholic and Mentally Ill Patients

About 9 to 10 percent of the people in the United States are considered to be “problem drinkers,” and of these, about half suffer from alcoholism (258). Alcoholics are over-represented in the hospital population. Alcoholism leads directly to diseases such as cirrhosis of the liver; it also *raises* the probability and increases the severity of other health conditions, such as accidental injuries, cardiovascular problems and cancer (93). From 30 to 50 percent of hospital admissions, excluding obstetrics, are estimated to be for alcoholic patients; most are admitted for disorders other than alcoholism (179,240,258).<sup>1</sup> Among the elderly, the incidence of alcoholism is believed to be somewhat lower than in the general population; however, those who do abuse alcohol are at even greater risk for adverse health effects than younger alcoholics (37).

Even if a DRG is entirely or predominantly composed of alcoholics, if payment reflects the higher cost of treatment of these individuals, then no special problem arises. Indeed, this is true when comorbidities associated with alcoholism qualify as complicating conditions and are thus reflected in the DRG weights. (Some mental disorders are also complicating conditions.) However, alcoholics in DRGs not directly associated with alcoholism or related comorbidities are likely to be unprofitable patients for a number of reasons. They have special physiological problems: For example, they are often malnourished, their infections heal slowly, and they are more likely to experience complications (93,227,258). They may seek care later than other patients and thus may have more advanced disease. Since they are less compliant than other patients (116) and often lack stable home situations, they may have to remain in the hospital longer because they cannot safely be sent home (207). They have multiple health problems and may need workups for more than one condition. Under PPS, multiple workups during the same admission are unprofitable, and the alcoholic patient’s noncompliance may make it impractical to schedule another stay.

Alcoholic and mentally ill patients in medical or surgical DRGs are particularly vulnerable to “dumping.” (It may also be easy to allow such patients to sign out against medical advice. These patients have been generally found to be uncooperative if special efforts are not made to conciliate them (179).)<sup>2</sup> Moreover, if a particular hospital is known in the community to be insensitive to the needs of alcoholic and mentally ill patients, then such patients may be less likely to select that hospital (207).

Psychiatric disorders other than alcoholism are also associated with physical disorders. For example, one classic study showed a positive and significant correlation between the severity of psychiatric disorder and the number of major physical conditions, such as cardiovascular and respiratory diseases (92). The prevalence of mental disorders in elderly medical and surgical inpatients has been estimated at between 40 and 50 percent (184).

It is more difficult to generalize about the problems of treating mentally ill patients for physical illness, and less is known about the degree to which extra costs are involved. Certain subgroups, such as schizophrenics and patients suffering from dementia, are likely to suffer from malnutrition, lack of regular medical care, noncompliance with therapeutic regimes, and absence of stable home situations which tend to raise the cost of treating them. Patients being treated with psychotropic medications are subject to drug interactions (252).

<sup>1</sup>Note the difficulty of arriving at an acceptable definition of alcoholism and the great variability in the estimates of the percentage of alcoholics found in the different studies. Others have pointed out that the diagnosis of alcoholism frequently does not appear on the charts of many patients who have alcohol-related problems (179).

<sup>2</sup>In a study of patients who signed out against medical advice at Peter Bent Brigham Hospital, 42 percent were alcoholics compared with 15 percent in the control group (179).

pitals provided "two-class care" (91); private patients with their own private physicians were treated differently from ward patients. Hospitals are no longer organized in this way, though, and it seems unlikely that there will be an increase in this kind of differential treatment. Two-class care would violate Joint Commission on Accreditation of Hospital standards and Medicare conditions of participation.<sup>7</sup> Most important, it would raise ethical problems for physicians and might expose them and hospitals to malpractice liability.<sup>8</sup> However, it is not necessary for a hospital to have a "two-class" system for differential treatment to occur, particularly with respect to access to specific services. For example, there are strong financial incentives against providing extended hospitalizations requiring intensive care (52) or electrophysiologic testing (198). Those patients who could benefit most from services may not receive them. (See box 7-B for a discussion of rationing of one kind of health service among potential recipients in Great Britain. )

<sup>7</sup> Medicare conditions of participation are requirements that a hospital must meet in order to be allowed to receive payments for Medicare patients.

<sup>8</sup> Several cases of two-class care in emergency rooms have recently been reported as results of financial pressures on hospitals. In one case, the Arizona Supreme Court dismissed the case against the physicians because they had been willing to treat the uninsured, indigent patient but held the hospital liable because the patient could not get admitted (73, 243,402 ).

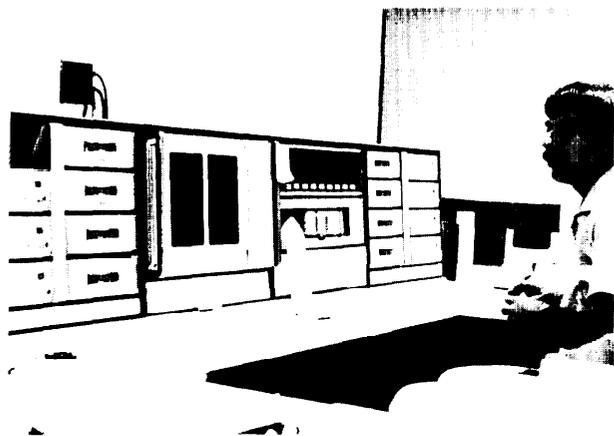


Photo credit Fairfax Hospital Association

Access to intensive care may be jeopardized by PPS, because of the strong financial incentives against providing extended hospitalizations requiring intensive care.

## Access to Other Sites of Care

Although PPS directly affects inpatient care, its incentives reach beyond the hospital stay to other sites in the health care system. Specifically, the incentives of PPS will affect access to ambulatory care, posthospital care (including long-term care and home health care), and VA care. These areas are discussed below. Access for veterans is discussed as a separate section because of the importance of the VA system to the Federal Government.

### Access to Ambulatory Care

Ambulatory care is the usual mode of entry into the health care delivery system, so it is of special importance in studies of access to care. Although Medicare's PPS does not cover ambulatory care, PPS incentives may have an indirect effect on equity of access to ambulatory care, both in and out of hospitals for both Medicare and non-Medicare patients. Because of the incentive to reduce the number of services within particular DRGs, for example, many services previously offered only to inpatients (e.g., some diagnostic testing) may be offered at outpatient sites. Some medical technologies, including cataract surgery, have already largely been moved from inpatient to outpatient settings, and others are likely to follow their lead. Access to these services may change, but in unknown ways.

Hospital outpatient care has increased in recent years, partly because hospitals have expanded their services in response to financial pressures and partly because patients have come to expect more types of care from hospitals. The general financial pressure on hospitals will cause them to re-examine the relationship between true costs and returns for outpatient care. There will be an incentive to allocate more costs to outpatient departments, to eliminate any services whose costs cannot be fully covered, to raise charges if demand permits, and to cut back on free or subsidized ambulatory care provided in outpatient departments or emergency rooms. Since low-income persons and persons without insurance are particularly likely to use outpatient departments and emergency rooms as their usual sources of care, the effects of this on their access to ambulatory care could be substantial.

### Box 7-B—Access to Specialized Care: The Case of Hemodialysis in Great Britain<sup>1</sup>

One of the technologies that is often used as an example of restricted access to specialized medical care is hemodialysis, the use of a machine to cleanse the blood of a patient whose kidneys have failed. Prior to the inclusion of patients with end-stage renal disease (ESRD) in the Medicare program by the Social Security Amendments of 1972, few machines and expensive dialysis led to varying access for different people in the United States. In some communities, committees decided who would be allowed to receive hemodialysis on their scarce machines. However, since Medicare began to cover patients with ESRD, virtually everyone in the United States, at least currently, has access to some form of dialysis.

The story is different in Great Britain, though, where the National Health Service, with its limited budget, decides who will receive treatment for kidney failure. Most of the patients in Britain who receive hemodialysis have acute kidney failure, not chronic or end-stage renal disease. The United States has about three times the proportion of patients receiving dialysis as in Britain. Kidney transplantation is also a method of overcoming the problem of kidney failure, and it is performed approximately with the same frequency in Britain as in the United States.

What are the criteria for determining who in Great Britain will receive dialysis? There are no official, explicit criteria, but physicians in Britain admit that the following factors influence their hemodialysis decisions: age of the patient (usually those 55 and over do not receive it); vascular complications of diabetes; other medical diseases; physical handicaps; mental illness; and lack of adequate facilities in the home. Rejection criteria vary from dialysis center to dialysis center.

Regional variations in the resources available for dialysis also influence who receives hemodialysis in Britain, although *some* physicians refuse to admit that some of their decisions are not based *on* medical criteria. Most local physicians balance their decisionmaking between medical indications and resource realities, thus lessening the disappointment of the patients who might be turned away from a dialysis center to which they had been referred. Patients, for their part, respect the advice of their physicians and usually accept it without complaint.

British physicians, whether or not they admit using resource constraints in their decisionmaking for patients with kidney failure, tend to be more conservative in their criteria. They reportedly do not agree with treating all the patients who are treated in the United States, on philosophical as well as practical bases.

<sup>1</sup>Based on a discussion in H. J. Aaron and W. B. Schwartz, *The Painful Prescription* (Washington, DC: The Brookings Institution, 1984)

### Access to Posthospital Care<sup>1</sup>

Medicare's PPS gives a financial incentive to hospitals to discharge patients as quickly as possible. As a result, the number of patients who need posthospital care in nursing homes or their own homes is likely to grow, because they are being discharged at an earlier stage in their recovery. In addition, hospitals will be more reluctant to provide care for patients who need only custodial care but cannot obtain immediate nursing home

placement. If a hospital, attending physician, or a utilization and quality control peer review organization determines that a patient is no longer in need of acute care, access to post hospital care becomes even more critical. And the existing range of services covered under Medicare's home care and skilled nursing care benefits is so limited that it is likely to cause difficulties for patients discharged earlier and sicker (236). Historically, hospitals have augmented the effective supply of long-term care beds by providing such "back-up" days, largely at Medicare expense (342). Thus, PPS is expected to have a significant impact on the nursing home and home health care industries (201).

<sup>1</sup>The General Accounting Office is conducting a study entitled "Information Requirements for Evaluating the Impacts of Medicare Prospective Payment on Posthospital Long-Term-Care Services." One of the key issues identified in a preliminary report is access to services. See ch. 10 for a brief description of this study (297).



Photo credit Fairfax Hospital Association

As PPS provides financial incentives to discharge patients at an earlier stage of recovery, access to posthospital care, such as home health care, becomes critical to monitor.

The potential impact of the incentive for earlier discharges raises several issues for evaluation. Are Medicare patients receiving an appropriate level of posthospital care after discharge? Are there adverse effects on access to long-term care of other patients seeking entry into nursing homes, as discharged Medicare patients take the available beds?

Access to nursing home care was a problem in many, but not all, States before the introduction of PPS. Incentives created by the Medicare and Medicaid programs have led to a segmented market, characterized by permanent excess demand for beds. Patients with private funds have no difficulty obtaining beds. Medicaid and Medicare patients do have difficulty, although for different reasons (101,259).

Medicare coverage for skilled nursing care is limited, and the uncertainties of coverage following hospitalization put nursing homes at financial risk. Extra nursing care needs and the requirement of copayment by the beneficiary<sup>10</sup> make many nursing homes reluctant to admit short-stay Medicare patients. Only about 5 percent of skilled nursing facility (SNF) industry revenues are from Medicare.

<sup>10</sup>Medicare does not pay for days in intermediate care facilities. Medicare covers 100 percent of the cost of care in skilled nursing facilities (SNFS) for a period of 20 days, and .50 percent of care between the 21st day and the 100th day. Medicare coverage ends after the 100th day. For most illnesses, 100 days is more than sufficient.

In contrast to Medicare coverage, Medicaid coverage is fairly comprehensive and predictable. However, the level of reimbursement is lower; States have chosen to hold down the costs of their Medicaid programs by reimbursing at a level such that the supply of beds is insufficient for the demand. Consequently the queue of Medicaid patients is permanent. This may allow discrimination among patients along dimensions such as race (215) or intensity of care required.

With the increased pressure for early discharge caused by PPS, there is danger of adverse effects on access for discharged Medicare and Medicaid patients. Nursing homes may continue to find short-term Medicare patients unattractive; alternatively, nursing homes may choose to serve the Medicare patients, thereby exacerbating access problems for the Medicaid population.

Access to care will be affected by more than the behavior of the nursing home industry. Most significant will be the potential for an increase in the provision of posthospital care (including nursing home and home health care) by hospitals. There are already indications that many hospitals will decide that the easiest way to handle the discharge problem is to provide such care themselves. Hospitals can also convert acute care beds to "extended care" beds (skilled or intermediate care levels) if they are approved by the State certificate-of-need program. The swing-bed program under Medicare allows small rural hospitals to provide skilled nursing level care to Medicare patients who would otherwise be discharged but have no access to an SNF bed (1.59). If these responses expand the supply of care sufficiently, access might even improve.

The distribution of cost is another matter for concern. Medicare coverage for nursing home care is significantly more limited than coverage for inpatient hospital care. Thus, substitution may shift costs from Medicare to patients and their families. To the extent that Medicare patients eventually become sufficiently impoverished to go on Medicaid, costs will be shifted to the State Medicaid programs.

### Access for Veterans

One group of elderly persons, veterans of military service, has a separate legislated health care

system in the VA. The VA provides hospital care and other medical services and supplies with the cost borne wholly by the Federal Government.<sup>11</sup> In 1980, 3 million veterans were over age 65, amounting to 12 percent of the population over age 65 (110). That percent will increase remarkably to 26 percent by the year 2000, before declining later. Under current eligibility rules for VA hospital care, veterans over age 65 do not have to meet criteria of “inability to pay” to qualify for care. Veterans with a service-connected disability have the highest priority for available resources, while other applicants are accepted on a “space available” basis.

Medicare’s PPS may shift demand for services to the VA. The potential quantitative importance of such a shift is highlighted by data from a national mail survey of households conducted in 1977 (110). Of the estimated 3.3 million veterans hospitalized in non-VA hospitals, 18 percent were Medicare beneficiaries. These estimated 600,000 hospitalizations with a VA “option” represented about 2 percent of all hospitalizations.

The incentives provided by PPS for non-VA hospitals to cut services within DRGs, to transfer sicker patients to other hospitals, and to avoid

<sup>11</sup>The VA operates about 170 inpatient facilities dispersed throughout the nation with a total of nearly 90,000 hospital beds. In addition, ambulatory care, long-term care, drugs, mobility and sensory aids, and other related services are provided at no charge when appropriate and when available

admitting certain patients because of severity of illness, DRG classification, or other cost-based reasons is likely to increase the demand for VA hospital care. For example, hospitals that are good at determining the relative costliness of patients before admission would find patients’ eligibility for VA care attractive for referral purposes or, after admission, for transfer purposes. Eligibility for VA care gives veterans greater access to some health care services than nonveterans. As long as they can afford it, however, patients will probably continue to prefer non-VA care.

The impact of a PPS-induced shift in the demand for VA care on VA expenditures will depend not only on the extent of the shift and the kinds of patients likely to seek VA care, but also on the response of the VA and Congress to these changes in demand. The VA operates under a national budget appropriation that is allocated by VA’s central management among regions, districts, and facilities. If Congress responds to the increased demand for services with higher VA budgets, savings from PPS would be partially eroded. Congress could also change eligibility rules, including the priority ratings.

PPS maybe less important to resulting patterns of VA utilization than specific budget legislation and internal policies. Evaluating access, then, must include studying changes in the amount of VA care sought by elderly veterans and the translation of that demand into actual utilization of VA services.

## APPROACHES TO EVALUATING THE IMPACTS OF PPS ON EQUITY OF ACCESS

As noted earlier, equity of access to care cannot be measured directly. Rather, the nature of access must be inferred from measurement of certain indicators of potential (availability) and realized (utilization) access. A great deal of work has been done to define proxy measures of access, and several important empirical studies have attempted to measure access to care in the general population (4). The focus here, however, is on measures that directly relate to the predicted impacts of PPS on access to care for Medicare *beneficiaries*.

The remainder of this chapter, discusses the evaluation questions that stem from the predicted impacts of PPS on access. It also analyzes the available data sources for the studies that may provide the answers.

### Critical Evaluation Questions

The previous discussion of potential impacts of PPS on access to health care raises the following five critical evaluation questions:

- How has PPS affected the availability of inpatient hospital care?
- How have interhospital transfers of Medicare patients changed since the implementation of PPS?
- Has PPS affected the utilization of inpatient care for vulnerable groups (e.g., alcoholic, mentally ill, disabled, or frail elderly patients)?
- How has PPS affected the availability and utilization of posthospital care for Medicare recipients?
- Has the demand for care in VA hospitals increased, and if so, has the increase resulted in longer waiting lists for medical attention?

### **Evaluating the Effects of PPS on the Availability of Inpatient Hospital Care**

Measuring changes in the availability of inpatient hospital care is straightforward and relatively simple. Interpreting how changes in the availability of inpatient hospital care actually represent changes in access, however, is rather difficult. Nonetheless, studies that compare the availability of care before and after the implementation of Medicare's PPS could signal the possibility that PPS has changed access for specific vulnerable groups. Further studies could then be undertaken to quantify the access changes.

The availability of inpatient care refers both to the number of hospitals and hospital beds and to the number of specialized hospital services. With respect to hospitals and hospital beds, studies could examine the differences pre- and post-PPS in numbers of hospitals or beds by region, State, and county or by urban versus rural location. Because early analyses indicate that hospitals in the South and Northeast will tend to fare better than those in other regions, it is important to know that patients in the other regions will not suffer. Other possible studies include comparisons of the distribution of hospitals by size and by the characteristics of the patients they serve,

Even if there are no undesirable changes in the availability of hospital beds, the availability of specialized, high cost hospital services could change for some patients. Select services, such as burn units, intensive care units, and cardiac cath-

eterization labs, could be studied for pre/post-PPS changes. Any changes discovered, however, could be the result of changes in policy or changes in technology that would have occurred even in the absence of PPS.

### **Evaluating Changes in Interhospital Transfers of Medicare Patients Under PPS**

The incentive that PPS gives hospitals to transfer financially undesirable Medicare patients to other hospitals is strong enough to warrant studies of changes in transfer patterns before and after the inception of PPS. A study of whether the *number* of interhospital transfers has changed, however, provides little information on the *appropriateness* of the transfers: Are patients being transferred to receive better care or to relieve the hospital of financial burden?

The question of the appropriateness of transfers can be answered with most certainty by reviewing the medical records of samples of patients. But prior to such a time-consuming and expensive study, studies are needed to identify patterns of transfers that are likely to be inappropriate. An analysis of the medical, demographic, and socioeconomic characteristics of transferred patients could reveal whether specific groups of patients (e.g., income level, race, or type of illness) were transferred more frequently post-PPS than they were pre-PPS. Studies of the origins and destinations of interhospital transfers by type of hospital (e.g., public/private, teaching/nonteaching, urban/rural) could also provide insight into changes in transfer policies. If hospitals that serve a disproportionate share of indigent patients are constant recipients of transfers, it is likely that access to quality care will be compromised for the transferred patients. Classification of hospitals as "disproportionate share" hospitals is much more difficult than classification as "teaching" or "rural," however.

### **Evaluating the Effects of PPS on Utilization of Inpatient Care for Vulnerable Groups**

As noted throughout this chapter, a particular access concern is the impact of PPS on specific vulnerable groups of patients, including (but not necessarily limited to) alcoholic, mentally ill, dis-

abled, and frail elderly patients. Comparing their utilization of care pre- and post-PPS, as indicated by admission and use of special high cost services, is critical for evaluating the effects of PPS on access.

Although it is relatively easy to measure the admissions and special services used by any particular group, the identification of the members of that group is quite difficult. Some conditions, such as alcoholism or mental illness, carry so much stigma that these conditions are likely to be underreported. Furthermore, despite the importance of studies of known vulnerable populations, it is necessary to be aware that targeting evaluation efforts on groups currently thought to be particularly vulnerable may obscure the identification of other groups for which access problems due to PPS may develop. Problems reported anecdotally may be of some help in identifying any such groups.

### **Evaluating the Effects of PPS on the Availability and Utilization of Posthospital Care**

There are three important types of studies that may measure changes in access to posthospital care. The first is to measure the number of SNF beds actually available to Medicare patients within Medicare-certified facilities. The second is to compare the pre- and post-PPS utilization of SNF days by Medicare beneficiaries, while the third is to compare utilization of home health services.

Interpreting changes in the availability and utilization of posthospital care with respect to changes in access is similar to interpreting changes in interhospital transfers—an increase or a decrease in availability or utilization says little about access to the *appropriate* level of care. In addition, policy changes that promote the use of posthospital care that have occurred independent of PPS make identification of access problems difficult. Patient-based studies of changes in the patterns, of use of both hospital and posthospital services will be needed to identify PPS effects with greater accuracy. And, multiple investigator-initiated studies looking at these problems may provide the objectivity and informed judgment needed to interpret observed changes.

### **Evaluating Post-PPS Changes in the Utilization of Care for Veterans**

Since a substantial proportion of veterans who are Medicare beneficiaries are hospitalized in non-VA hospitals, it is important to learn whether Medicare's PPS will increase demand for VA hospital care. The PPS incentives for hospitals to cut services within DRGs and to practice selective admissions are likely to result in decreased access to care for some veterans. Although veterans as a group have more access to some services than other groups, a change in the usual patterns of care may result in decreased access for some veterans. One measure of decreased access is longer VA waiting lists for medical attention. A comparison of pre-PPS waiting lists with post-PPS lists would be relatively easy and would provide the impetus for further investigation. A study of how many elderly veterans have been discharged by each facility in each DRG during the last 4 years—before and after PPS—would also indicate changes in access for veterans. Finally, a study of VA outpatient visits could be used to monitor the volume of care provided to elderly veterans and the mix of outpatient and inpatient care over time (110).

### **Data Sources**

The major databases for the study of access to care fall into four groups: 1) data on the availability and distribution of care (e. g., hospitals and hospital beds, inpatient special services, nursing homes and nursing home beds, home health care agencies); 2) databases on utilization of care (e. g., Medicare program data, VA data, institution-based surveys of utilization); and 3) ongoing and special population-based interview surveys. Many of these are described in appendixes C, D, and E.

At the national level, there are several sources of data on the availability and distribution of health care services (see app. D). The best information on hospital characteristics comes from the American Hospital Association (AHA) Annual Survey of Hospitals. The best sources of data on other facilities, including SNFS and home health agencies, are the Medicare/Medicaid Provider of Services Master File or the national Master Facility Inventory of Hospitals and Institutions. State

certificate-of-need databases give information on the numbers and types of facilities and services according to population needs. Of course, the information collected varies from State to State. In addition, periodic special surveys of staffing and equipment in hospitals provide evidence on the distribution of specialized facilities and procedures across hospitals.

The databases on the availability of services are generally excellent indicators of potential access. While the AHA Annual Survey of Hospitals must depend on individual institutions for supplying responses and is not purported to be an official and all-inclusive list of services offered by individual hospitals, it is in fact reasonably accurate and complete. Since data for the AHA survey, the Provider of Services Master File, and the Master Facility Inventory have been collected for a number of years, pre/post-PPS comparisons are possible.

Medicare's Part A claims file is the principal source of detailed information on the utilization of hospital, nursing home, and home health services by Medicare beneficiaries (see app. E). In addition, institution-based surveys conducted under the auspices of AHA and the Commission on Professional and Hospital Activities provide information on limited personal characteristics of patients as well as medical information on diagnoses, surgical procedures, other procedures, and length of stay for different diagnoses. AHA has done a special set of surveys on the relationship between the provision of medical care to the poor and uninsured and hospitals' financial status. It has also conducted a survey of discharge planning designed to provide a baseline before the implementation of PPS.

Data on availability and utilization of VA services are obtainable from the VA's central office as well as from individual facilities. Application forms become part of a patient's medical record at VA hospitals, but only monthly aggregates of some of the application data are available centrally. Currently, the aggregate data available for each VA facility include, among others: total applications; determinations of need for inpatient, ambulatory, or nursing home care; rejected applications; and service-connected disabilities. Un-

fortunately, age and DRG data are not included, but the samples are 100-percent samples (110).

Waiting list information is also available through the VA central office. The hospital inpatient activity code sheet is a monthly summary provided by each facility for each bed section that indicates the length of waiting lists for applicants, subdivided by service-connected disability and others, and further subdivided by whether they are waiting in another hospital or are waiting outside hospitals. Again, these data are not available by age of applicant (110). The most extensive data on VA hospital discharges are found in the Patient Treatment File. There is also a VA file containing a 20-percent sample of VA outpatient visits. The data in the VA outpatient file are inferior to the data in the Patient Treatment File in diagnostic detail.

Measures of the utilization of care are crude; they have traditionally been limited to simple aggregates of the number of physician visits or hospital bed-days for a group of people, without measures of variation in the intensity of resource use or other dimensions of care. Data on nursing home utilization are especially poor, because they provide no information on patient mix. Furthermore, comparing post-PPS aggregate statistics on Medicare program services utilization for any type of service (e. g., inpatient hospital care, skilled nursing care) with pre-PPS statistics offers little insight into the contribution of PPS due to Medicare policy changes that occurred simultaneously with the inception of PPS.

Population-based interview surveys conducted before and after PPS may be useful to identify some PPS effects with greater accuracy. The data are derived from direct interviews with individuals about their personal characteristics, their insurance coverage, and their use of care during a particular time period. Since they are population-based and periodic, these studies are useful for measuring changes in the amount of hospital care and types of hospitals used by the general population and by key subgroups both before and after PPS.

The most important population-based health care surveys are: 1) the National Survey of Access to Medical Care of the Center for Health

Administration Studies of the University of Chicago; 2) the Health Interview Survey of the National Center for Health Statistics; 3) the National Medical Care Utilization and Expenditure Survey (NMCUES) of the National Center for Health Statistics and HCFA; and 4) the National Medical Care Expenditure Survey (NMCES) of the National Center for Health Services Research (see app. C for a description of these surveys).

Information on the “quality” and “time and money costs” of care has improved considerably in recent years. Traditionally, studies of access emphasized only how much and what kinds of care people obtained, the distance traveled and time waited, and the presence or absence of insur-

ance coverage. In particular, NMCES and NMCUES were important steps toward improving information about the financial burdens of obtaining medical care, although they need to be repeated if results are to be useful.

Overall, the routinely maintained databases on access can show up gross disparities in access to care. But when access becomes more equal, or when interest is focused on the finer points of access for particular high-risk subgroups, or for particular types of care, the routine data become seriously inadequate. Moreover, the need for greater conceptual clarity about what constitutes acceptable access becomes acute.

## CONCLUSIONS

Evaluating the impact of PPS on access to health care is particularly important because Medicare’s original purpose was to ensure access for its eligible population (**100,186**). This chapter has shown that PPS incentives could result in hospital behavior that affects access for both Medicare and non-Medicare patients.

Although it is difficult to define “access,” clear measures of the volume, geographical distribution, and utilization of many types of health care services in a variety of settings (e. g., hospitals, SNFS) exist. These measures can be used as critical indicators of potential and realized access, but they have to be carefully interpreted. Several types of databases are available for measuring these indicators. Changes in access and equity of

access can be evaluated using these data over time and across population groups.

Monitoring changes in access to health care or differences among groups of people in access may identify new equity of access problems or better quantify old ones. Verifying the existence of an access problem may prove easier than determining whether the problem is old or new and, if new, to what extent it may be attributed to PPS. Yet, it may not be as important to know the answer to the latter question as it is to solve equity of access problems. The critical issue becomes whether or not PPS as currently structured can solve the problems, and if not, what changes need to be made,