
Chapter 6

ESWL and Federal Payment Policies

ESWL and Federal Payment Policies

INTRODUCTION

Third-party payment for health care services exerts a critical influence on the development, adoption, and use of medical technologies. Decisions to pay for the use of particular new technologies are explicit statements that those technologies are no longer considered investigational; decisions to cease paying for old ones are statements about the appropriateness of their use given the current state of the art. In turn, the method of payment for the use of technologies and the level of payment allowed can have a substantial impact, both on decisions by health care providers to acquire and use new technologies and on decisions by manufacturers to develop them.

Payment for medical technologies is more than a financial acknowledgment of services rendered. Because payment influences use, payment policies are a tool that can be used by government and private sector third-party payers alike in an attempt to influence use and encourage appropriate decisions about how to treat any given condition. The fact that payment policies do not always have these effects by no means diminishes the importance of this tool. Unintended and unavoidable consequences of a payment policy, as well as intended effects, affect the speed and extent of technology diffusion throughout the health care system and the way in which a technology is used.

The potential to treat many urinary stones less expensively with extracorporeal shock wave lithotripsy (ESWL) than with alternative technologies, despite the substantial price of ESWL equipment, makes this technology an easily identified target for payment policies that encourage providers to supply an adequate, but not excessive, amount of the service. In this chapter, it will become evident that payers have found this objective a particularly difficult one to reach. Payment for ESWL is strongly influenced by the fact that ESWL may be substituted for more expensive surgical procedures. There is strong pressure by providers to have those paying for ESWL do so

at the same level as these more highly priced alternatives. From the payers' perspective, generous payment levels can encourage rapid diffusion of an innovative technology but are unlikely to control health care expenditures. Even more critically, high payment for ESWL may encourage overpurchase. Since the per-case technical cost of ESWL is so sensitive to the number of patients treated,¹ overpurchase would drive up the cost to ESWL centers of providing the technology,

Private and public sector payers alike moved quickly to include ESWL as a covered benefit once it was approved by the Food and Drug Administration (FDA) for marketing. The first plan to cover ESWL was Blue Cross/Blue Shield of Massachusetts, which initiated coverage only a few months after the procedure was first offered, in its investigational phase, at Massachusetts General Hospital in Boston. Rather than waiting for the formal announcement by FDA that the Dornier lithotripter was approved for marketing, Blue Cross/Blue Shield of Massachusetts based its decision in part on the FDA's Advisory Panel on Urological Devices' recommendation for approval, which was announced at the end of May 1984. The insurance plan began covering the procedure in June 1984. At least one other Blue Cross/Blue Shield plan began covering ESWL before FDA approval was officially announced as well (155).

This chapter describes Medicare payment policies, how they apply to ESWL, and how they may influence the adoption and use of this technology. Since Medicare is both a significant proportion of the medical care market and a model for other purchasers, its influences can be pervasive. Hospital payment policies affect purchase and availability of ESWL equipment; payment for

¹Strictly speaking, the cost of an ESWL procedure declines with the number of procedures, not the number of patients (since a patient may have more than one procedure). However, relatively few patients undergo multiple ESWL procedures in one hospital stay, so the generalization that per-case costs decline as the number of patients increases is also true.

ambulatory services influence the site of care as well as the decision to purchase; and physician payment policies can influence physicians' willingness to perform the procedure.

Three other Federal organizations provide or purchase health care for a significant number of Americans: the Veterans Administration (VA),

MEDICARE

Medicare payment policies affect the cost, distribution, and use of ESWL in four ways: through the decision to cover (or not cover) the technology, through the payment method, through the payment level, and through the fact that Medicare policies are a potential model for other payers. Hospital, ambulatory facility, and physician payment policies all may influence ESWL.

ESWL has important implications for Medicare, because it may often be the preferred treatment for some patients who are particularly likely to be covered by Medicare. Many elderly patients who form stones may have had previous operations for stones. Additional surgery could endanger their kidneys, and they are often at higher risk of complications from surgery than younger stone patients. Also, many disabled spinal cord injury patients are covered by Medicare. This population tends to form urinary stones repeatedly, and ESWL may prevent the need for multiple surgeries that could damage the kidneys. A final implication of ESWL for Medicare is that to the extent that ESWL can prevent kidney destruction through neglected stones or repeated operations, this technology can reduce the size of the population with end-stage renal disease, whose treatment is covered by Medicare. The latter benefit assumes, of course, that no damage from ESWL itself will develop over time.

Coverage Decisions

Medicare, enacted as a Social Security benefit in 1965, now provides medical care coverage for over 30 million aged and disabled persons (190). The Medicare program is prohibited by law from paying for medical services that are not "reason-

the Department of Defense (DOD), and the Indian Health Service (IHS). The services provided or purchased by these organizations may also have a significant cumulative effect on the market for ESWL. This chapter concludes by reviewing the policies of these organizations for purchasing ESWL devices or services.

able and necessary" (Public Law 89-97). This clause has been interpreted by the Health Care Financing Administration (HCFA) as precluding payment for experimental technologies. Decisions regarding when a new technology ceases to be experimental are largely left up to local intermediaries and carriers, the entities under contract to HCFA to make payments to beneficiaries on Medicare's behalf for hospital (Part A) and physician (Part B) services, respectively (178). These decisions can vary considerably across regions. One carrier may determine that a particular technology is safe and effective, for example, while another considers it still investigational and will not reimburse physicians for its use.

If payment for the use of a particular technology is sufficiently problematic, HCFA may request that the Public Health Service's Office of Health Technology Assessment (OHTA)² assess the status of the technology and make a coverage recommendation to HCFA. HCFA, in turn, will make a coverage decision based on that assessment and inform the carriers and intermediaries of the decision. Until recently, cost criteria were not included as factors in assessments for Medicare coverage decisions, and expensive technologies were eligible for coverage without regard to cost effectiveness (178). However, Public Law 98-551 expanded OHTA'S medical technology assessment criteria to allow examination of cost effectiveness and medical appropriateness issues as well (181).

²OHTA has no organizational affiliation with the Congressional Office of Technology Assessment. OHTA evaluates medical technologies for the Health Care Financing Administration for the purpose of making coverage decisions under Medicare and Medicaid.

HCFA's criteria for determining whether a technology is experimental for purposes of Medicare reimbursement differs in an important way from FDA's criteria for determining whether a technology should receive premarket approval. FDA considers a medical device to be safe and effective when, on the basis of valid scientific evidence, the device is shown to be safe and to have the effect claimed by the manufacturers under the manufacturer's specified conditions of use (21 U.S.C. 260). On the other hand, HCFA's criteria include consideration of the state of development of the technology, the degree of acceptance of the technology in the medical community, and the likelihood that the technology will produce a health benefit (176). Thus, a technology may be approved by FDA for marketing purposes but not covered by HCFA for payment (178).

In the case of ESWL, cost considerations probably helped to prompt the Secretary of the Department of Health and Human Services' request for an expedited coverage review of this technology (186). HCFA announced in May 1985 that Medicare would cover ESWL beginning with any treatments administered on or after March 15, 1985 (12), only 3 months after FDA approved the Dornier lithotripter for marketing and 11 months after the first ESWL device was installed in the United States. In contrast, HCFA first approved coverage of computed tomography (CT) scanning, an expensive diagnostic technology, 39 months after the first U.S. scanner was installed (169). Magnetic resonance imaging (MRI), a complex as well as a costly diagnostic technology, did not receive formal coverage under Medicare until November 1985 (191), nearly 60 months after MRI first appeared in the United States (169). These technologies are not directly comparable to ESWL, since they are diagnostic rather than therapeutic technologies and have a more complex set of potential uses. Still, the contrast demonstrates that ESWL underwent a relatively quick and efficient coverage process. The primary difficulty that ESWL presented to Medicare coverage concerned not the medical abilities of this technology but ESWL's classification for payment purposes, discussed in the next section.

Hospital Payment

Classification of ESWL

Services received by a Medicare beneficiary as a hospital inpatient are covered under Medicare Part A and paid through Medicare's prospective payment system (PPS). Under PPS, hospitals are reimbursed at a pre-set rate for each Medicare patient they admit for diagnosis or treatment. Capital costs (depreciation, interest, and return-on-equity to for-profit institutions) and costs associated with medical education are not included in the rates,³ and PPS does not presently apply to Part B services, such as physician visits and hospital outpatient services.

The payment rate itself depends in most cases on four elements:

1. the patient's principal diagnosis,
2. the principal procedure performed on that patient,
3. the patient's age, and
4. the presence or absence of any medical complications or coexisting diseases.

Based on these elements, each hospital patient is assigned to a diagnosis-related group (DRG). A person with a principal diagnosis of urinary stones who required treatment might be classified into any of six DRGs, as listed in table 11. The payment received by the hospital for treating that patient depends on the weight⁴ of that patient's DRG; weights are greater (and payment higher) if the patient is *over 69* years of age, has coexisting conditions needing treatment, or undergoes a surgical rather than a medical procedure.

A major dilemma that surrounded Medicare coverage of ESWL for hospital payment purposes concerned how the use of this technology should be coded under the International Classification of

³As of December 1985.

⁴DRG weights are based on the relative operating costs of treatment for the average patient within each DRG. A patient in a DRG with a weight of 2.0, for instance, is assumed to require on average four times the resources of a patient in a DRG with a weight of 0.5. Corresponding to these weights, Medicare DRG reimbursement to the hospital for the first patient would be roughly four times as high as reimbursement for the second. Actual payments depend at present on actual hospital costs and other factors.

Table 11.—Diagnosis-Related Groups Used as Basis for Medicare Payment for Urinary Stone Treatment, 1986

Diagnosis-related group	Weight ^a	Arithmetic mean length of stay (days) ^b
304 (surgical) major urinary procedures, age 70 or older or with comorbidities and complications	20323	13.5
305 (surgical) major urinary procedures, under age 70 without comorbidities and complications	1.4894	10.4
310 (surgical) transurethral procedures, age 70 or older or with comorbidities and complications ..	0.7266	5.6
311 (surgical) transurethral procedures, under age 70 without comorbidities and complications	0.5563	4.1
323 (medical) urinary stones, age 70 or older or with comorbidities and complications	.05863	5.1
324 (medical) urinary stones, under age 70 without comorbidities and complications	04098	3.6

^aThe weight assigned a DRG is assumed to represent the relative costliness of resources used for patients in that DRG. Payment for a DRG with a weight of 2 is approximately four times that for a DRG with a weight of 0.5.

^bThe average length of hospital stay for patients in that DRG.

SOURCE: 50 FR 35646.

Diseases, Ninth Revision Clinical Modification (ICD-9-CM), described in appendix C. Each diagnosis and each procedure has a corresponding code that is used to represent that diagnosis or procedure on the hospital's patient discharge sheet. These codes in turn are used by the DRG Grouper—the computer program used by Medicare intermediaries (and many hospitals) to assign DRGs—to determine which DRG is the applicable one for that patient.

The problem of classifying ESWL for hospital payment purposes involves not the diagnostic codes but the procedural ones. Since ESWL is a new technology, there is no ICD-9-CM procedure code specifically intended to correspond to its use. Surgical removal was the usual nonmedical treatment for urinary stones when the coding system was last revised. The only code that specifies stone fragmentation is the code for ultrasonic lithotripsy (59.95), which is usually reported together with a second code that represents the endoscopic procedure for which ultrasonic lithotripsy is used (see app. C). ESWL has been temporarily assigned this ultrasonic lithotripsy code (**50 FR 24374**). When used alone, without an accompanying code for an invasive procedure (as is the case for simple ESWL treatment), this code causes ESWL to be classified for PPS purposes as medical treatment (126).

Level of Payment for ESWL

Because ESWL is classified as “medical” rather than “surgical,” the procedure is reimbursed at a level that is only about one-third of that for surgery or percutaneous lithotripsy, the main alter-

natives (see table 11). This occurs because the weights assigned to DRGs **304** and **305** for surgical treatment of kidney stones—and thus the payment to the hospital for those DRGs—are triple the weights for medical treatment. Since treatment by ESWL alone places a patient in one of these medical DRGs (**323** or **324**), use of it without an adjunct procedure brings the hospital roughly one-third the payment that it would were the procedure assigned into DRGs **304** or **305**.⁵

Under PPS, the incentive or disincentive for hospitals to encourage physicians to prescribe ESWL depends not only on how much ESWL is reimbursed relative to invasive procedures but also on how its per-case operating costs compare to the DRG payment to the hospital. From the point of view of operating costs, ESWL will be favored by hospitals if the surplus of DRG payment over costs is larger (or the deficit smaller) than the difference between payment and cost for alternative procedures, regardless of the DRG in which the alternatives are classified. Since different hospitals will have different costs for each alternative, including ESWL, the direction and size of financial incentives will vary as well.

As an example of how a hospital might fare when providing ESWL to Medicare patients, one can calculate a very rough average payment rate for DRG 323. If the phase-in period for PPS had been complete, and a hospital's DRG payment had not been partially dependent on that hospital's actual costs, the 1984 Federal standardized

⁵The creation of a new ICD-9-CM code and a new DRG for ESWL has been suggested as a long-run solution to this classification problem (50 FR 24374).

DRG payment (exclusive of regional adjustments for wage rates, etc.) for operating costs in DRG 323 would have ranged from approximately \$1,400 in rural regions to approximately \$1,775 in urban ones. DRG 324 has a lower weight than DRG 323 and correspondingly pays a lower amount (in this simplified calculation, \$979 to \$1,227, depending on hospital location). Based on these figures, it would appear that as long as ESWL is classified as a medical procedure under PPS, and the weights of DRGs 323 and 324 remain unchanged, some efficient urban hospitals—those with low per-case ESWL costs and minimal ancillary costs and lengths of stay for uncomplicated patients—may be able to perform the procedure within the payment rate even when PPS is fully implemented. For example, the hypothetical hospital in table 5 treating 1,500 patient per year would have average per-case operating costs of \$1,638 for patients with 4-day stays. However, these assumed Federal DRG rates are approximate, and even some efficient hospitals might have losses.

The Prospective Payment Assessment Commission (ProPAC), which offers recommendations to HCFA regarding PPS, examined actual average 1984 DRG payments for ESWL in seven hospitals (131). ProPAC found average payments of \$2,655 for DRG 323 and average payments of \$1,857 for DRG 324. Based on reported average costs of these hospitals (see table 5, ch. 5), ProPAC estimated that the DRG payments covered these hospitals' costs 98 percent of the time in DRG 323, but only 68 percent of the time in DRG 324. The Commission compared its estimates with information from a survey of 16 hospitals with ESWL centers. These hospitals received average payments \$2,557 for DRG 322 and \$1,787 for DRG 324 (40). This preliminary analysis led

ProPAC to recommend that all ESWL admissions be temporarily classified into DRG 323 (131).

Overall effects of PPS on ESWL depend on reimbursement for the capital cost of acquiring the lithotripter as well as the operating costs of using it. In particular, the overall effects depend on whether or not capital costs continue to be treated as a pass-through.⁷ Under the current provisions, hospitals acquiring the device are reimbursed for Medicare's share of the actual costs of depreciation and interest. It is unlikely that this pass-through provision for capital costs will be extended past fiscal year 1987 (which ends October 1987), and the decision on precisely how Medicare's share of capital expenses will be paid in the future may have a substantial effect on hospitals' decisions to install ESWL units. Any difficulty in recovering the average costs of serving Medicare patients could be exacerbated if capital costs are incorporated into PPS.⁸

Hospital Strategies

As hospitals gain experience with ESWL, the per-case costs of ancillary and routine care services are likely to decline. Length of stay for ESWL, for example, already appears to be declining. However, if more hospitals continue to acquire ESWL units and the caseloads at each hospital declines accordingly, low per-case costs will be

⁷Capital costs include such factors as depreciation on plant and equipment and interest on loans for these acquisitions. Under current Medicare law, the proportion of these costs that apply to Medicare-related treatment are paid to the hospital as a "pass-through," i.e., reimbursed at actual cost rather than as a part of the per-case payment rates. Congress and the Department of Health and Human Services are currently considering a number of proposals to reimburse capital expenses, such as a flat percentage add-on to DRG payment amounts (73).

⁸The extent to which the inclusion of capital costs in PPS will affect hospitals' purchasing decisions regarding ESWL depends on whether hospitals consider the investment in terms of the income generated by the DRG payments for urinary stones, or whether they consider the investment in terms of total anticipated surplus from all DRG payments. If, for example, all DRG payments were increased by 7 percent to cover capital costs, hospital administrators under the first strategy might decide not to invest because the additional 7 percent of the rate for urinary stone treatment would be unlikely to cover the purchase price of the ESWL device. Administrators making decisions under the second strategy, on the other hand, might consider the investment if they had no other significant capital obligations that year, because the additional 7 percent of total 1985 revenue would cover the price.

⁹For simplicity's sake, these figures are calculated in 1984 dollars, and with 1986 DRG weights, but as if the prospective payment system's phase-in period were complete; they do not represent actual payments to any hospital. They also ignore area wage-related and other adjustments. Payment rate = DRG weight X standardized national payment amount (after urban rural adjustment). The national rural rate is $0.5863 \times \$2,388.08 = \$1,400.13$; the national urban rate is $0.5863 \times \$2,993.45 = \$1,775.06$. For DRG 324, with a weight of 0.4098, the rates are \$978.63 and \$1,226.72, respectively. (Standardized dollar amounts are from 49 FR 27446.)

more difficult to realize. Unless payment rates rise, profits will also decline.

Nevertheless, there are a number of incentives to provide ESWL, and a number of strategies for providing it, that exist even if a hospital expects little or no profit (or surplus) from providing the service to Medicare patients. For example, a minimal profit from providing ESWL may be acceptable if it is dependable, with little variation in costs among patients treated. One advantage that ESWL (when performed alone) holds over all the invasive alternatives is the potential for fewer postprocedure complications (187). As a result, hospitals may be able to expect less variation in the length of stay and fewer outliers.⁹

Even if hospitals under PPS cannot recoup direct costs when treating Medicare patients with ESWL, they may still treat these patients in order to enhance their public image and attract other patients. Or, they may use ESWL if, once the lithotripter is acquired, treating Medicare patients enables the unit to be used to full capacity, lowering the per-case costs of all patients treated and thus enabling the hospital to produce a surplus from other payment sources.

Two other alternatives are available to hospitals that cannot recoup the costs of performing ESWL under present DRG payment. First, hospitals can treat patients as outpatients, whose care is currently reimbursed at cost rather than at a fixed rate. Second, the hospital could readmit patients who required a secondary procedure to ESWL (or a second ESWL treatment). In this case the hospital would be paid twice, and if the secondary procedure were percutaneous lithotripsy, the second payment would be at a higher rate, because percutaneous lithotripsy is classified into the more heavily weighted DRG that includes admissions for major urinary surgery (see table 11). In some cases the second admission might be at the patient's local hospital rather than at the ESWL center hospital, a situation that would provide a

financial advantage to the local hospital, but not to the one providing ESWL.¹⁰

Impacts of ESWL on Medicare Inpatients

The past records of DRGs can give a rough maximum estimate of the Medicare population that might use ESWL, as well as some baseline comparisons for actual use (155). The Medpar database compiled by HCFA consists of a 20 percent sample of all Medicare admissions during 1981. It was the original source for developing and verifying the DRG methods currently used by Medicare to pay hospitals. Table 12 shows data derived from the Medpar database for admissions in 1981 in DRGs relating to stone disease.

The surgical DRGs for treatment of urinary tract disorders (**304, 305, 310, 311**) are relatively broadly defined and may include a number of cases beyond those that would ultimately receive ESWL. This situation occurs because these DRGs encompass other major ureter and kidney procedures as well as surgery for stones. Estimates derived from the Medpar data should, however, represent the upper limit of stone surgery (155).

DRGs 304 and **305** include major open surgery on the kidney. Together these DRGs, representing the group of Medicare patients who would be most affected by the use of lithotripsy, accounted for 25 percent of all surgery performed on the kidney in 1981. The second major group of Medicare patients who received surgery in 1981 were those who underwent a transurethral procedure, classified into DRGs 310 and 311. These DRGs accounted for the remaining 75 percent of the cases that may have undergone a "surgical" procedure for stone removal. To the extent that ESWL now substitutes for these procedures, there will be fewer than in 1981. However, some patients who undergo ESWL may need an additional transurethral procedure to remove small fragments that do not pass spontaneously. Therefore,

⁹Under Medicare's PPS, an "outlier" is a patient whose associated costs or length of stay greatly exceeds the mean for the relevant DRG.

¹⁰A third possibility is that hospitals might admit patients for care after they have received ESWL elsewhere, or even on an ambulatory basis in the same hospital. This option is discussed in the next section on ambulatory ESWL.

Table 12.—Medicare Admissions in DRGs Relating to Stone Disease as Represented in the Medpar Database, 1981^a

Treatment	DRG	Admissions	Mean hospital charge	DRG weight	Mean length of stay (days)
Surgical and transurethral procedures	304	1,725 ^a	\$5,077	1.7952	12.8
	305	1,039	3,708	1.7043	11.9
	310	6,162	1,534	0.7071	4.9
	311	1,779	1,277	0.5871	4.1
Total		10,705			
Medical treatment for urinary stones	323	6,691	1,551	0.7131	4.9
	324	3,165	1,180	0.5472	3.9
Total		9,856			
Urinary tract signs and symptoms	325	6,799	1,577	0.7247	5.4
	326	2,020	1,274	0.5875	4.3
	327 ^b	0	0	0.5027	3.1
Total		8,819			

^aThe Medpar database in 1981 contained a 20-percent sample of Medicare hospital bills. It is maintained by the Health Care Financing Administration and is the source from which DRG weights and mean lengths of stay were calculated.

^bThis DRG represents treatment for urinary stone symptoms for children aged 0-17. The Medpar database did not include cases in this group due to insufficient numbers. The Medicare data was supplemented by data from Maryland and Michigan to derive DRG weights and mean lengths of stay.

SOURCE: U.S. Department of Health and Human Services, Health Care Financing Administration data, as cited in J. A. Showstack, E. J. Perez-Stable, and E. Sawitz, "Extracorporeal Shock Wave Lithotripsy: Clinical Application and Medicare Physician Payment," paper prepared for the Office of Technology Assessment, Washington, DC, August 1, 1985.

the expected reduction in transurethral procedures due to the introduction of ESWL may not be as great as the reduction in open procedures (155).

Medicare currently pays for ESWL as an inpatient procedure in DRGs 323 and 324, which are for the medical treatment of stones. Presumably these DRGs include patients who are admitted for supportive (fluid and analgesic) therapy until the stone is passed spontaneously. They may also include metabolic workups for stone disease. In 1981, there were almost as many Medicare admissions in these DRGs (8,856) as there were total surgeries in DRG 304, 305, 310, and 311 (10,705) (155). As currently used, ESWL has only a small role in the acute care of patients with stones, and it is unclear how substantially this large pool of stone disease will be affected by ESWL. It can be argued that as ESWL becomes more common, the criteria for its use in the acute phase of stone disease will be less restrictive, and many of these patients may receive ESWL. Thus, there would be a shift from conservative medical treatment to more direct interventions (155).

The difficult problem faced by Medicare is to ensure access to ESWL without encouraging,

through high payment rates, overpurchase of ESWL units and overuse of them once they are installed. Since overpurchase, which leads to higher per-case costs, and overuse, which implies unnecessary care, can both lead to higher Medicare expenditures than would occur under more prudent use, the problem is not a trivial one.

One strategy is for Medicare to pay for ESWL admissions at a rate very close to (or even lower than) average costs, a strategy with several potential effects. First, Medicare total payment rates (including payments for capital expenses) that are lower than average costs¹¹ may discourage purchase of a Dornier lithotripter in some instances, if potential purchasers anticipate that Medicare patients will be a significant proportion of the lithotripter caseload. To the extent that this dis-

¹¹ Average costs = total costs ÷ number of patients served. Average costs decline as the number of ESWL patients increases, but at high numbers they may decline very slowly. They are contrasted with marginal costs, which are the additional costs incurred from treating one more patient. For ESWL, marginal costs include the cost of that patient's anesthesia, electrodes, electricity, other supplies, laboratory and radiologic tests, and patient care. They do not include the cost of the machine itself, which has already been incurred and remains even if no patients at all are treated. Within the caseloads for which ESWL has been used to date, average costs have probably been higher than marginal costs.

incentive restrains all but a few hospitals in any region from installing ESWL units, the low payment rates will themselves help ensure that per-case costs stay low because the machines that exist can be used to capacity. Low Medicare payment rates may also discourage unnecessary ESWL procedures where patients can be treated more appropriately with safer or less expensive therapies. Thus, low payment rates may reduce Medicare expenditures still further while actually enhancing the quality of care provided to those individuals who might have undergone unnecessary procedures. However, to the extent that all patients must travel further and wait longer for ESWL due to fewer devices, low Medicare payment rates will reduce access to ESWL.

Another effect of low Medicare payment rates may be to reduce access to ESWL specifically for Medicare patients. Some centers may be willing to treat Medicare patients as long as payments cover the marginal costs of ESWL treatment (i. e., the costs of actually using the machine on that patient, such as staff time, supplies, hospital bed, and ancillary tests, but not including capital costs). Facilities that cannot recover even these marginal costs of treating Medicare patients will have strong incentives not to treat such patients if alternatives are available. For example, a hospital might encourage physicians to provide alternative (and possibly less safe) treatments to these patients, if alternatives existed with costs that were lower than the respective reimbursement rates for those therapies. Or, the facility could encourage physicians to refer Medicare patients to another ESWL unit. Since few ESWL treatments are done to resolve immediately life-threatening complications, the latter is an entirely plausible scenario; some patients might be given a choice between a long wait for treatment at that facility or a referral to an ESWL unit in another facility, another city, or even another State.

If hospitals can recover the marginal but not the average costs of treating Medicare patients, then all fixed costs (e.g., interest, depreciation, maintenance contract) must be borne by other payers of patients receiving ESWL. As chapter 5 demonstrated, the charges of most hospitals currently providing ESWL are probably considerably higher than their costs. Individuals or third-

party payers that reimburse for services on the basis of charges would bear most of the fixed costs of the ESWL units in this scenario.

An issue currently faced by Medicare is whether to change the DRG payment level for ESWL. Three methods of changing payment have been proposed. First, payment for ESWL could be changed by recalculating the costs of the two DRGs in which it is currently classified ("recalibration"). The effect of this strategy would be to pay for patients who receive ESWL at a rate close to average costs and to pay for patients in those DRGs who receive other therapies at a rate higher than average costs. This strategy would probably have little effect on the incentives of hospitals to encourage physicians to treat patients with ESWL rather than surgery. A second option would be to reclassify ESWL into the DRG that includes open and percutaneous surgery for stones. This alternative would offer hospital administrators a direct incentive to encourage physicians to offer the least costly of the three procedures. However, it could also increase expenditures of the Medicare program by offering an incentive to perform ESWL on patients who would not otherwise be considered for aggressive treatment. A third alternative is to create a new DRG exclusively for ESWL. This option would most accurately reimburse actual average costs, but it would not necessarily discourage hospitals from overpurchasing. It also set a precedent for gallstone lithotripsy, which may soon face similar issues.

Finally, a fourth option that has not been proposed publicly would be the inclusion of ESWL procedures in DRGs 310 and 311, the DRGs for transurethral procedures. These DRGs have weights slightly higher than DRGs for medical treatment but considerably lower than those for open surgery.

Payment to Ambulatory Facilities

Because of its noninvasive nature, ESWL probably can be used safely on an ambulatory basis under controlled circumstances for selected patients, where the patient is available to a urologist for pre- and postprocedure observation and testing and where appropriate hospital facilities are readily available for any postprocedure complications. As yet, ambulatory services, includ-

ing hospital outpatient services, are not incorporated into PPS.

Ambulatory services are reimbursed by Medicare under Part B, the Supplementary Medical Insurance program. Unlike Part A, Part B requires the beneficiary to pay monthly premiums, an annual deductible, and 20-percent coinsurance for many (but not all) services. The services provided by physicians, or in physicians' offices, are paid separately from the services provided in other facilities and are discussed in the next section. This section describes payment to other ambulatory facilities, namely hospital outpatient departments and ambulatory surgical centers (ASCS), which can receive direct Medicare payments to cover the costs of the facility, nursing and other staff services, routine supplies, and equipment.

Services provided in a hospital outpatient department are currently reimbursed by Medicare on the basis of the actual cost of providing them, unless the outpatient department has been separately certified as an ASC. Hospital outpatient services are not limited to any specific set of procedures.

By contrast, ambulatory services provided in a Medicare-certified ASC facility, either hospital-based or free-standing, are reimbursed according to a fee schedule. Only procedures specifically approved by HCFA for provision in an ASC are reimbursable under Medicare in this setting. Each procedure is classified into one of four rate categories, depending on the complexity of the service. An ASC is reimbursed at the appropriate full rate for the primary procedure performed and at 50 percent of the appropriate rate for secondary procedures. ESWL has not yet been included as a reimbursable procedure when performed in ASCS (189).

The HCFA coverage decision for ESWL did not explicitly restrict payment to inpatient ESWL treatment, so hospital outpatient ESWL is reimbursable under Medicare (205). The financial incentives under Medicare for hospitals to provide ESWL to ambulatory patients rather than inpatients will depend on: 1) whether the DRG-based payment is higher than marginal hospital costs, encouraging hospitals to increase hospital admissions for lithotripsy; 2) whether hospital

outpatient services become incorporated into PPS; and 3) whether a significant proportion of ambulatory patients receiving lithotripsy subsequently require hospital admission for postprocedure complications.

Medicare's policy is not to pay for hospital outpatient services if the patient was admitted to the hospital immediately afterwards (48 FR 250), though this policy may be very difficult to enforce. If a patient is given ambulatory lithotripsy treatment but must be admitted as an inpatient afterwards due to complications or a need for observation, the hospital should, according to regulations, be reimbursed only for the inpatient stay; the costs of the outpatient ESWL treatment would be disallowed. However, as long as ESWL treatment is classified into a medical DRG, the hospital has little to lose by trying outpatient treatment first because an admission after ESWL treatment could still legitimately be classified as medical treatment for urinary stones and thus would be reimbursed at the same rate as an admission that included ESWL treatment. Unless the preprocedure treatment was detected and payment for either the admission or the ambulatory procedure was denied, the hospital would receive payment not only for the costs of outpatient ESWL, but also payment for the post-ESWL admission at the same rate as if that admission had included ESWL treatment.

The incentive for an ASC to offer ESWL to Medicare patients depends, first, on whether Medicare approves the procedure as reimbursable if performed in that setting; and, second, on the size of the fee paid for free-standing center treatment relative to the cost of providing it. At present the standard maximum payment for a single ASC procedure, before labor index adjustments, is \$336 (189). An ASC must accept that amount as payment in full for all but the professional components of the service. If HCFA, in the future, were to include ESWL as a reimbursable ASC procedure, the agency could also create a new rate category for it. Without a higher rate category, there would be little incentive for ASCS to offer ESWL to Medicare patients. Nonetheless, the first ESWL treatment center in northern California, a non-hospital free-standing facility, has obtained Medicare certification as an ASC and has treated Medi-

care patients (68). As yet, since ESWL is not on the list of approved procedures for ASCs, this facility cannot receive payment from Medicare. Thus, in facilities such as this one, Medicare patients must pay the full facility-related charges themselves unless they have private insurance that covers the service.

The settings in which ESWL is provided may be strongly affected by different payment methods and payment levels. At present, because ESWL is not reimbursed by Medicare when provided in ASCs, only hospitals can receive direct payments for the facility-related portion of the costs of providing ESWL. If hospital outpatient services continue to be reimbursed on the basis of cost, any hospital in which the DRG payment is lower than cost will have a financial incentive to provide ESWL to Medicare patients as outpatients rather than as inpatients.

The Medicare patients currently undergoing ESWL in ASCs are incurring very high out-of-pocket expenses, unless they have supplementary insurance that covers the treatment in this setting. These patients, as well as the ASC providers, may try to influence HCFA to provide Medicare coverage for ESWL in this setting. If HCFA should do so, it would probably also need to establish a new rate category. The current rates were originally based on average charges for procedures in each category, but the rates have not been increased since they were established in 1982. It would probably be financially imprudent for any ASC to provide ESWL to Medicare patients at present rates.

Payment for Physician Services

Physician services to Medicare patients, regardless of the setting in which they are provided, are reimbursed under Part B. The amounts paid to physicians for their services are not determined either on the basis of cost or by a nationally based rate schedule. Instead, payment amounts are calculated by the carriers (the Part B Medicare contractors) in each region of the United States and are based on physician charge data in that area.

Medicare pays physicians for their services on the basis of the approved charge per service. This

approved charge, except in special circumstances, is defined to be the lower of the actual charge billed by the physician, the physician's customary charge for that service, and the prevailing charge of physicians in the area for that service. 12 (This method is commonly referred to as "CPR" payment.) Medicare then 'pays for 80 percent of the approved charge, less any deductible owed by the patient. The patient pays the remaining 20 percent. In addition, if the physician does not accept the Medicare-approved charge as full payment ("accepting assignment"), the patient is liable for any charges in excess of the approved amount.

Since ESWL is a new technology, each carrier must determine the approved charge for the procedure without any historical Medicare data. Because ESWL is currently performed by urologists and partially replaces percutaneous and open surgical methods of upper urinary stone removal, the prices paid by Medicare for these procedures have formed the early basis for determination of payment for ESWL. Table 13 presents some sample urologists' fees for various stone removal proce-

""The customary charge is the physician's median submitted charge for that service during the data collection period preceding the fee screen year. The customary charge is fluid. If a physician revises his or her fees, the carrier will recognize the change when processing claims with the new charges" (182). The prevailing charge is the lowest charge that is greater than or equal to the 75th percentile of the distribution of all physicians' customary charges weighted by the number of times each physician billed for the service in that locality during the calendar year preceding the fee screen year. Since 1972, the prevailing charge is limited in its rate of increase over time by the Medicare Economic Index, an annually adjusted index that relates the increase of physicians' fees relative to increases in costs and general earnings levels (182).

Table 13.—Sample Urologists' Fees for Selected Stone Removal Procedures, 1985*

Procedure	Fee
Nephrolithotomy for staghorn stone	\$2,500
Simple nephrolithotomy.	1,500
Pyelolithotomy.	1,500
Ureterolithotomy	1,500
Percutaneous nephrostolithotomy	2,000
Ureteroscopy and stone removal	1,250

asee glossary (app. D) for definitions of Procedure terms

SOURCE American Urological Association, "Summary and Recommendations of the Ad Hoc Committee To Study the Safety and Clinical Effectiveness of the Current Technology of 1) Percutaneous Lithotripsy, and 2) Non-invasive Lithotripsy, " presented to the AUA, New Orleans, Louisiana, May 9, 1985.

dures. The price paid by Medicare varies in each region both because the contemporary charges for stone surgery vary in each region and because each carrier establishes rates independently in various ways.

Massachusetts Blue Cross/Blue Shield, for example, the carrier for Medicare in that State, established physician payment for ESWL at a rate roughly equal to pyelolithotomy¹⁵ plus urography, or approximately \$1,250 per procedure (155). Blue Cross/Blue Shield of Virginia, based on negotiations with the one urologist-owned facility that performed ESWL in that State as of 1985, agreed to reimburse physicians approximately \$1,200 for the procedure, about the same level as a percutaneous removal of a stone in the upper ureter. Blue Shield of Greater New York reported that it had established a negotiated fee "substantially less than the usual pyelolithotomy fee of approximately \$1,900" (155). Blue Cross/Blue Shield of Texas considered ESWL a routine "surgical" procedure and decided on a level of reimbursement based on a surgeon's time involved in monitoring the procedure. A reimbursement level was established at a rate "somewhat less than \$2,000" (155). For many payers, the incentive to offer a fee lower than that for surgical treatment has been tempered by the desire to maintain a nonadversarial relationship with both patients and physicians (155).¹⁴

Many Medicare carriers still have little experience in paying for ESWL; carriers in States that do not yet have lithotripters may have no established policy for payment for the procedure. In January 1986, HCFA issued guidelines to help carriers develop a "reasonable" charge for the service. In these guidelines, HCFA suggested that physicians might be appropriately reimbursed for ESWL at a rate comparable to that paid for radiological procedures rather than at a rate comparable to that for surgery (192). Although these

guidelines are not binding on the carriers, they help carriers justify paying physicians less for ESWL than for urinary stone surgery.

Policy is also lacking in an area relating to the provision of ambulatory ESWL: physician reimbursement for a technical fee. Medicare regulations specify that it will pay for physician services and for supplies "incident to" those services that are common office supplies and included in the physician's bill (42 CFR 405). Because certain "incidental" services provided by office physicians (such as radiologists) have substantial equipment costs, these services are paid by Medicare in two parts: one part for the professional fee (e. g., for interpreting an X-ray), and one part for the "technical" fee (e. g., for use of the X-ray equipment). In essence, the technical fee is the equivalent of a facility fee for physicians who own and operate major medical equipment in their offices. ESWL is neither a "common" office supply nor "incidental" to the patient's treatment, and HCFA's current policy is that no technical fee can be paid to physicians who own as well as operate ESWL equipment (72). However, if ESWL is commonly provided in nonhospital settings, and it is not a reimbursable ASC procedure, some changes in this policy may be indicated.

A more general problem with the current method used by Medicare to pay physicians is that it does not adjust prices paid for performing new procedures as the costs of those procedures decline over time. In the short run, while physicians are learning ESWL, it may be appropriate to pay for the procedure at the same rate as percutaneous or open surgery. Over time, however, as physicians become more experienced and make more efficient use of their own time and the support staff, and as the technology itself evolves, the costs of performing ESWL will fall. Under the current system, however, the prices paid by Medicare are likely to remain high, because they will be based on the ample charges of the past. This pattern has been noted with coronary bypass surgery, in which the initially high charges for the procedure remained even after the costs of performing it had declined dramatically (140).

¹⁵Pyelolithotomy refers to open surgery for stones in the renal pelvis.

¹⁴It is interesting that ESWL is categorized as "medical" for Medicare hospital payment purposes but is categorized as "surgical" for physician payment purposes. Arguments over whether or not ESWL is a "surgical" procedure (and, by implication, should be performed only by surgeons) are frequently heated and illuminate the novel characteristics of this technology (see ch. 5).

A number of alternative ways to pay physicians are currently under consideration, and the method chosen could have some effect on the provision of ESWL to Medicare patients (182). Figure 2 presents a schematic representation of how these alternatives, discussed below, relate to the services provided a urinary stone patient.

The least drastic change would involve some adjustment to the present payment system, retaining the current method of deriving an approved charge but eliminating differences in payment among physicians in different specialties or regions providing the same service. Eliminating specialty differentials would be likely to have little effect on ESWL, at least in the short run, since at present only urologists perform the procedure. Eliminating geographic differentials would only be likely to have an effect if one price were paid across all States; prices within States are likely to be similar anyway due to the relatively small number of lithotripsy centers. As is apparent from the previous discussion, if differences across States were eliminated, some urologists might be paid several hundred dollars more or less than at present. A third potential adjustment to the present system would be to reevaluate expensive new procedures, such as ESWL, after they have been in use for a short time and lower the approved charge if the assessment indicated that the physician costs of providing those procedures had declined. For example, carriers might explicitly reevaluate the relative time required by physician for ESWL in 2 or 3 years to determine whether the payment rate should be adjusted.

Taking a somewhat different approach in the context of the current system, Medicare might contract with one or more physicians and lithotripsy centers in each area who are willing to provide the service at a lower price than their competitors. The contracting option may be attractive for Medicare in regions where several lithotripters exist, although it is not without drawbacks. On the one hand, Medicare holds a small but substantial market share of the demand for this technology,¹⁵ and most physicians would probably

dislike losing their entire Medicare business. On the other hand, if physicians at only certain ESWL facilities would perform ESWL for the Medicare price, beneficiaries would either have to use those facilities (possibly traveling long distances to do so) or be liable for large uncovered amounts.

Another option for paying physicians is to use fee schedules, in which each service is reimbursed at a set fee that does not depend on actual charges (although the initial schedule could be based on charges). This option might enable Medicare to adjust the price of ESWL more easily over time, either based on an analysis of resource costs or a comparison of relative charges for ESWL and alternative technologies. Some fee schedule approaches, however, might require intense negotiations over the relative value of performing ESWL, similar to current determinations of the starting "reasonable" rate for performing the procedure.

A third option being considered is payment for packages of related services. These packages could take a number of forms. For example, Medicare could pay for all the inpatient physician services provided to a patient at a single rate that depended on the DRG of that patient. Or, Medicare could package physician services provided in any setting into some classification system analogous to DRGs and reimburse at a set rate for each package. The first alternative might tend to encourage outpatient ESWL, while the second might encourage the least costly setting for providing ESWL. Other alternatives, such as paying a set rate for all services provided in conjunction with a particular procedure, could influence the mix of physicians involved in ESWL and the incentives to provide ESWL rather than alternative modes of treatment. However, there is no experience with payment for packages that include the services of more than one physician, and for some alternatives no usable payment categories have been developed (182).

A final option, cavitation payment, involves paying a provider or some intermediary a set rate per beneficiary for all the covered care used by that person during the year (or some other time period). An important feature of cavitation is that it would encourage provision of the least costly

¹⁵The actual number of people with upper urinary stones who are eligible for Medicare is unknown, but these patients probably represent somewhat less than a quarter of the total population with such stones (205).

Figure 2.—Alternative Methods for Medicare Payment for Services Provided to a Hypothetical Patient Presenting the Symptom of Extreme Flank Pain^a

Pre hospital ambulatory services					Inpatient services								Post-hospital ambulatory services					
First office Visit primary physician	First office Visit urologist	Urinalysis	Intravenous pyelogram (IVP) ^b	Radiologist service for IVP	Radiologist service for KUB X ray ^c	Anesthesiologist service for extracorporeal shock wave lithotripsy (ESWL)	Urologist ESWL and hospital visits ^d	Physician consultant services ^e	ESWL procedure	Hospital stay ^f	Urine culture	KUB x ray	Blood tests	Post-hospital office visit urologist	IVP or KUB X-ray	Radiologist service for IVP or KUB X-ray	Second post hospital visit urologist ^g	One office visit every 6 months urologist
Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service ^h	Fee-for-service	DRG payment for inpatient facility services					Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service
Ambulatory episode of care package					Inpatient episode of care package for ambulatory services				DRG payment for inpatient facility services					Ambulatory episode of care package			Ambulatory visit package	
Capitation payment ^h																		

☐ Payment by CPR or fee schedulesⁱ ☒ Packaged payment^j

^aThe actual treatment would depend on the particular patient. Some patients might be seen initially in an emergency room or require a procedure other than ESWL, such as surgery.

^bA, intravenous x-ray of the kidneys and ureters.

^cX-ray of the kidneys, ureters, and bladder.

^dThe number of hospital visits would vary with the patient's length of stay.

^eThe urologist performing ESWL might charge a fee for the ESWL procedure separate from fees for related hospital visits or instead might charge a global fee covering both the procedure and the visit. Complicated patients might need to be seen by specialists such as cardiologists.

^fThe current average length of stay for ESWL is 33 days (40).

^gMost Patients would need only one post-hospital Visit. A patient With gout or multiple stone recurrence might need two post hospital Visits and additional visits every 6 months.

^hIt is assumed that DRG payment would continue for inpatient facility services.

^jpackaged payment can include services related to an ambulatory or inpatient episode of care or an ambulatory visit. A total episode of care package, though, not shown here would combine services in ambulatory and inpatient episodes of care. A procedure package also not shown here would include services associated with a specific procedure such as ESWL.

^kCapitation payment here includes ambulatory and inpatient services, including physician, ancillary, and hospital services. Capitation payment could alternatively exclude hospital inpatient services.

SOURCE: Office of Technology Assessment 1986 (182). Based on data from A Jenkins University of Virginia Medical School Charlottesville, VA. Personal communication, Nov 26, 1985.

treatment for upper urinary stones among all possible alternatives, including provision in the least costly setting. Cavitation payment to providers has been implemented widely in the private sector, including some limited experience with the Medicare population. Cavitation payment to fiscal intermediaries (e. g., the Part B Medicare carriers), in which the intermediary would then pay providers for care to beneficiaries, has not been tried (182).

ESWL illustrates several issues regarding Medicare physician payment policies that are distinct from hospital payment issues. Incorporating ESWL into the physician payment system has posed less of a problem than it did with hospital payment, largely because the coding system used to classify and report physician procedures, unlike the hospital coding system, is systematically and annually updated. ESWL already has its own code in this system, the Current Procedure Terminology. But unlike Medicare hospital payment, determining physician payment level is not automatic once classification of a new procedure is

made. Determining that level, done autonomously by each carrier, has presented a significant issue that is amplified by the fact that the technology is one that may become cheaper over time for physicians to provide.

HCFA has in fact taken an unusual approach toward establishing appropriate initial physician payment levels for ESWL. As mentioned above, in January **1986**, HCFA advised carriers to “consider the time and effort involved in other non-surgical procedures” when “evaluating and determining a reasonable charge for ESWL” (192). It specifically suggested that carriers pay a global fee for ESWL and associated pre- and posttreatment physician case, and that the ESWL component of this payment might be more appropriately compared to certain urinary radiological procedures than to surgical treatments for urinary stones (192). Addressing the problem more generally, HCFA has recently proposed setting special Part B payment limits for expensive technologies with few suppliers (51 FR 5726).

OTHER PUBLIC PAYERS FOR HEALTH CARE SERVICES

Veterans Administration

VA provides free or subsidized health care services to the eligible proportion of the approximately **30** million veterans of the U.S. Armed Services. Veterans are eligible to receive VA care if they have service-connected disabilities, or if they have nonservice-connected disabilities and are unable to obtain or pay for needed care. VA operates 172 hospitals around the country and treated about 1.25 million acute care patients in 1981. In addition, VA provides a variety of long-term care and ambulatory services (174). With an annual budget of approximately \$1.3 billion for medical supplies and equipment, VA represents a substantial market for medical devices (179).

A significant number—about one-fourth—of patients in VA hospitals with a diagnosis of upper urinary stones are spinal cord injury patients (102). VA operates 19 Spinal Cord Injury Centers around the country to provide special, targeted

care to this population (180). Spinal cord injury patients tend to form recurring urinary stones because their disability usually prevents normal urination, inviting urinary tract infections and requiring a permanent indwelling catheter (102). Thus, this population has a much higher incidence of stones than does the general U.S. population.

Routine equipment and supplies needed by VA hospitals may be purchased at the local level. The purchase of costly equipment, however, must be reviewed and approved by the VA central office in Washington, DC. A list of “controlled items” for equipment such as X-ray apparatus is maintained by the central office, and purchase of these items requires an evaluation of need. For expensive equipment, such as CT scanners, the VA central office ranks hospitals by perceived level of need and allocates funds separately from the individual hospital budgets. In the case of CT scanners, the VA marketing center purchased several

devices at once in order to negotiate a group discount (76). The marketing center purchases CT scanners for other government agencies such as DOD, enabling the center to combine purchases and negotiate quantity discounts from manufacturers.

In June 1983, the Chief Medical Director in the VA central office formed a High Technology Assessment Group to "determine what course the VA should follow with respect to acquisition of major new technology in the future" (168). At the first meeting of this group in 1984, the group was presented with data supporting the purchase of a Dornier lithotripter (102). These data, collected from a survey by the central office's Office of Surgical Services, indicated that **4,800** veterans underwent treatment for upper urinary stones in 1984, that the VA could support the purchase of several lithotripters (102). The Office of Surgical Services has requested two devices to be purchased in fiscal year **1986** and intends to request a third in fiscal year 1987. These lithotripters would be placed in VA hospitals serving a high proportion of spinal cord injury patients, possibly the facilities in Hines, Illinois; Long Beach, California; and Memphis, Tennessee **(102)**.

Meanwhile, arrangements to establish an ESWL facility at the VA hospital in New York City are already in place. This facility is an example of shared provision and use of lithotripsy. A Dornier lithotripter is being purchased by the Paralyzed Veterans of America and donated to the VA hospital. The hospital is providing the facility and funding renovations; a nearby private hospital is funding the staff to run it. The private hospital will refer patients to the facility, although VA patients will have first priority use. The facility is scheduled to become operative by the end of 1986 (102).

VA is a self-contained system that plans and purchases its own equipment and is on a finite budget. This can lead to a small number of ESWL machines at the facilities and in the areas where they will serve the greatest number of patients. A side effect of VA's self-contained system, however, is that VA's placement decisions are isolated from planning decisions made in the community at large. For example, the first ESWL facility at

the Bronx VA hospital is in an area already served by one ESWL unit. Of other VA spinal cord injury centers in line for a lithotripter, one is in the Chicago area (where several other facilities are planned in the community) and a second is in the Los Angeles area, which also has several units. There is no routine mechanism through which to share facilities or purchase services between VA and non-VA patients.

Spouses and unmarried children of certain disabled veterans, or survivors of such veterans, are covered under the Civilian Health and Medical Program of the Veterans Administration (186). This health care financing program operates in an identical manner to the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), described below.

Department of Defense

DOD operates military hospitals for use by persons in the U.S. Armed Services on active duty. It also operates CHAMPUS, which pays for much of the health care provided to military families.

CHAMPUS provides payment for medical services to dependents of active duty personnel and to Armed Services retirees, their families, and their survivors. It requires no premiums. All eligible persons may receive any inpatient or outpatient services provided at military hospitals. If they live near a military hospital (within certain zip codes), they must first determine whether services are available for inpatient care at that hospital before seeking care in the community in order to be covered by CHAMPUS. Ambulatory care does not require a predetermination of available services at the military facility. Care at military hospitals is provided on a space available basis. There is no charge for outpatient services received at a military hospital; inpatient services require a very small nominal charge per day (185).

If a CHAMPUS beneficiary does not live near a military hospital, or if the hospital has affirmed that the needed service is not available there, he or she may seek services in the community. In this case, CHAMPUS covers both inpatient and ambulatory services unless the beneficiary is also eligible for Medicare. Inpatient services require

a small fee per day or \$25 (whichever is more) on the part of active duty families, and a 25 percent copayment of the approved charges on the part of retirees and their families. Ambulatory services require a deductible and a copayment (20 percent of approved charges for active duty families and 25 percent for retirees and their families). Dependent parents and parents-in-law are not covered for community services (185).

Since no military hospitals as yet have ESWL, CHAMPUS pays for the service only in the community. Since there is very little charge history for the procedure, the program is reimbursing physicians for the billed charge until enough bills have been received to permit other calculations of an approved charge (69).

Indian Health Service

IHS, part of the Public Health Service in the U.S. Department of Health and Human Services, provides health care services for Native Americans through its own facilities or through contracted services provided to Native Americans in other facilities. In 1984, IHS operated 47 hospitals, and an additional 4 hospitals were tribal-operated. These hospitals vary greatly in size, but most are small; only four have more than 100 beds (183). There are a number of specialized services not available in any IHS hospital, such as cardiac catheterization, burn care, open heart surgery, and radiation therapy.

In 1984, the IHS service population consisted of approximately 937,000 American Indians and Alaskan Natives, and 102,843 Indian patients were admitted to IHS, contract, or tribal hospitals (194). Services in IHS facilities are provided without charge "to persons of Indian descent belonging to the Indian community served by the local facilities and program" (42 CFR 36). When specialty care is not available in an IHS direct service facility, a patient may be referred to a contract care facility (a physician, hospital, or other provider with whom the IHS has a contract for service to its population). To be eligible for contract care, an individual must be a member of, or closely associated with, a tribe that resides within a designated contract health service delivery area (42 CFR 36).¹⁶ Not all persons that consider themselves Native Americans reside in contract health service delivery areas, and not all that do are eligible for contract care.

Given the size and primary care orientation of IHS hospitals, it is highly unlikely that an ESWL device will be purchased by any of them. If the IHS hospital does not have surgical facilities, and urinary stone patients are referred to a contract hospital, the access of these patients to ESWL will depend on whether the contract hospital has an ESWL unit.

¹⁶Indian students, transients, and foster children are also eligible for contract services.