

Chapter 6

# **Selected Issues In Indian Health Care**

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# Selected Issues In Indian Health Care

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## INTRODUCTION

This chapter presents more detailed discussions of several issues that have been raised earlier in this report on Indian health care. The issues were selected because of their evident importance to Indian groups in all parts of the country, as expressed in discussions at the Office of Technology Assessment (OTA) regional meetings, and because of their interest to congressional committees in view of possible legislative action. The issues that have been selected for special analysis are: Indian Health Service (IHS) implementation of the Indian Self-Determination and Education Assistance Act of 1975 (Public Law 93-638); methods of resource allocation in IHS; the effects of high-cost cases in the IHS contract care program; and problems of data management in IHS.

From the time of its initiation 10 years ago, the IHS self-determination program (or 638 contract program, as it is known) has had a dual purpose—both to deliver health services under the administration of Indian tribal governments, and to strengthen the tribal governments themselves. The disagreements that have arisen between IHS and the Indian tribes during the program's implementation. The issues most often raised revolve around the adequacy of funding for tribally operated IHS programs, IHS contract administration policies (which vary somewhat among IHS areas), and striking a reasonable balance between IHS control and tribal flexibility in program implementation.

Although there have been many frustrations for the tribes and for IHS, there have been no proposals to abandon the self-determination program. Enthusiasm for self-determination has varied among the tribes, but 20 to 30 percent of the IHS clinical services budget now is administered by tribes under 638 contracts. The adequacy of IHS funding for self-determination health programs is the major concern. In view of current and expected future constraints on all Federal spending, including appropriations for IHS, the funding issue is likely to remain critical. Tribes

may decide not to undertake 638 contracts due to reasonable fears of the financial risks involved. Because Congress may consider amending the Self-Determination Act, this assessment reports views on the program gathered from discussions with IHS headquarters, IHS area office staff, and Indian tribal governments and health program administrators around the country. The IHS self-determination program also was identified for special study by the General Accounting Office (GAO), which is due to issue its report in 1986.

IHS's methods of allocating funds among its 12 service areas are a subject of general complaint: whether an area receives a large or small share of IHS resources, it is likely to be dissatisfied. IHS allocates its annual appropriations by a "historical" or "program continuity" budgeting approach, which means that existing facilities and services are supported at their previous year's level plus a share of budget increases. Contrary to the understanding of many tribes, the resource requirement methodology that figures in IHS's equity fund distribution does not play a role in overall budget allocations. To date, the IHS allocation process has not incorporated factors such as population size, health status and health service needs, relative geographic isolation, or the availability of other IHS or non-IHS services. It is not likely that IHS now could generate the data necessary to take all of these factors into account.

The results of IHS's program continuity budget approach can be documented in the unplanned, uneven distribution of funding (on a per capita basis), facilities and services, and staffing throughout the system. While some IHS areas are relatively well-served by IHS direct and contract care programs, other areas lack certain types of direct care services and are forced by inadequate funding to ration contract care referrals. Areas lacking IHS direct services are not compensated with additional contract care funding. IHS's own method of identifying tribes with the greatest resource deficiencies, in order to distribute a court-

ordered equity fund, provides ample evidence that eligible Indians in different parts of the country do not have equal access to IHS services. The equity fund distributions since 1981, which have been applied to less than 2 percent of IHS appropriations each year, have had little impact on IHS area base budgets. Although work has been underway recently to develop a resource allocation formula similar to the equity approach that reflects relative resource needs, the extent to which such a formula will be applied will be a political and administrative decision. IHS, which to date has been unable to apply a systematic approach to the cost-effective and equitable distribution of program increases, may in the near future be faced with the more difficult task of distributing budget reductions.

The congressional request for this assessment specifically asked for an analysis of the effects of high-cost cases on the IHS contract care program. For several years, there has been consensus among tribes, IHS, and Congress that the provision of contract care, which is intended to supplement services available from the IHS direct care system, is being seriously disrupted by the very high costs of a few emergency cases. Because of limited funding, IHS contract care programs operate under various rationing techniques, including eligibility requirements more restrictive than for direct care, a medical priority system that authorizes care for emergency and life-threatening conditions at the expense of less urgent services, and the required first use of non-IHS alternate providers and payers. The need to ration contract care services indicates that contract care funding is not adequate to meet expressed demand. It is not surprising, then, that a few high-cost cases can have severe negative effects on already constrained budgets. Some IHS areas have established area-level high-cost case contingency funds to help service units manage their contract care programs.

When Congress addressed the problem of IHS high-cost cases in the 1984 Indian Health Improvement Act (vetoed in October 1984), it found that available information did not indicate whether the proposed \$12 million catastrophic health emergency fund would be adequate to relieve the situation. For this reason, OTA made particular efforts to develop information on the subject;

however, the inability to obtain reliable, consistent data remained an obstacle to the analysis. Existing IHS data systems did not provide needed data items (e.g., complete costs of services in direct and contract care programs); and a special IHS data collection effort was informal and incomplete. Data on the causes of high-cost cases were not adequate to determine if IHS experiences an unusually high incidence of such conditions. The IHS population at risk for high-cost cases could not be defined with sufficient detail to merit consideration of options such as private reinsurance.

It was concluded, therefore, that the problem could be addressed as a budget management problem. The proposed revolving fund would be a reasonable way to provide temporary budget relief, although it would not benefit all IHS areas equally unless the threshold were adjusted to reflect relative costs among the areas. Work with available IHS cost data suggested that the \$12 million contingency fund would have been adequate to cover high-cost cases in 1983, but given medical cost inflation, it probably would not be adequate now.

The last issue in this chapter deals with the quality and availability of usable patient care and program management data in the IHS system. OTA did not attempt to perform a management evaluation of IHS in general or of its data systems in particular. In working with a wide range of IHS offices and staff over the course of the assessment, however, some general observations about data systems became apparent. First, IHS operates a large number of uncoordinated data systems that are not uniform among IHS areas, and which, therefore, cannot be easily aggregated to provide national program data. The systems depend on a mix of automated and manual support systems, which add to the problems of incompatibility. Second, data from most 638 contract programs have not been included in IHS data systems. Thus, many tables in this report include footnotes indicating the absence of data from 638 contractors. Although IHS issued a memorandum late in 1985 to require minimum data reporting from 638 programs, the effects of this policy change are not yet apparent. Third, cost data are particularly difficult to obtain from existing IHS data systems. There are systems that monitor IHS disbursements

for contract care, but these costs cannot be compared with costs of delivering the same services in IHS direct care facilities, so decisions about whether a service would be provided more cost-effectively by IHS or under contract cannot be made.

In many aspects of IHS operations, the inadequacy of program management information is

apparent. For several years, IHS has been planning a new, comprehensive Resource and Patient Management System that may or may not resolve some of these data problems; but it will require national program leadership, funding, and time for this new system to become a reality.

## SELF-DETERMINATION AND TRIBAL ASSUMPTION OF HEALTH SERVICES MANAGEMENT

### Introduction

The Indian Self-Determination and Education Assistance Act of 1975 (Public Law 93-638) offered Indian tribes the opportunity to assume management of programs operated for their benefit by the Bureau of Indian Affairs (BIA) in the U.S. Department of the Interior and by IHS in the U.S. Department of Health and Human Services (DHHS).

The Self-Determination Act (also known as the 638 law) has been implemented separately by BIA and IHS according to their own policies and regulations. IHS, BIA, and Indian tribes now have had 10 years' experience with self-determination. In IHS, self-determination is primarily a contract program, with decentralized administration through the 12 IHS area offices. There is no self-determination program office at IHS headquarters, although there is an office that coordinates liaison between IHS and tribal self-determination contractors. Officially, IHS has taken a neutral stance in encouraging or discouraging tribes from entering into self-determination contracts. The IHS position is that tribes exercise their rights under self-determination either by deciding or declining to assume management of health service programs (42 CFR Subpart 1, 36.201-36.202).

The responses of Indian tribes and tribal organizations to the opportunities of self-determination or 638 contracting have varied. While some Indian groups have worked enthusiastically to take over management of major components of their health care systems, other groups have been reluctant to participate, perhaps because they are

satisfied to let IHS manage their services or because they fear self-determination will lead to termination of the Federal responsibility for Indian health. Differences in the numbers and types of 638 contracts managed by tribes in the 12 IHS areas, described later in this section, illustrate the variability of tribal responses. Given this lack of unanimous support for 638 contracting among Indian tribes, IHS has preferred not to become a strong advocate of self-determination.

Self-determination has been the subject of considerable interest during its 10-year history. It was a major topic of discussion at the four regional meetings conducted by OTA to obtain tribal input to this study. Many tribal representatives expressed immediate concerns and frustrations with the 638 contract application process and with IHS monitoring of contracts. In spite of these difficulties, however, there was no apparent desire to eliminate the program; on the contrary, there were many suggestions on how self-determination could be made more attractive to tribes. GAO is completing a study of the IHS 638 contract process, based on detailed case studies in several IHS areas, which should be available in spring 1986. Congress may address some of the problems associated with self-determination contracting in future amendments to the law.

This section presents OTA's findings on the IHS self-determination program based on interviews, comments, and materials obtained during the regional meetings and related visits with tribes, tribal 638 contractors, and IHS headquarters and area staff. Following a background discussion of IHS implementation activities and a survey of

tribal contracts by IHS area, the discussion will focus on issues related to self-determination contracts with IHS.

IHS policies and regulations for implementing its self-determination program are an issue in themselves. The law specifies that self-determination contracts should be administered differently from Federal procurement contracts, because a 638 contract represents a transfer of funds and management responsibility, not a purchase of services from an outside provider. Rather than the usual arm's-length relationship between the Government and the contractor, self-determination requires IHS to work with prospective tribal contractors in developing their applications and to provide technical assistance as necessary. Self-determination contracting requires unique policies and modified contract regulations, which may explain some of the difficulties experienced both by tribal contractors and by IHS area staff. Also, because of IHS's decentralized administration of the program, variations have developed in how different IHS area offices implement and monitor 638 contracts.

Complaints about particular problems with 638 contract development and administration, which may be unavoidable to some extent, reflect larger issues of project control between IHS and tribal contractors. IHS contends that 638 contracted activities are extensions of IHS itself, and therefore IHS should retain responsibility and control. Tribes argue that they are assuming both responsibilities and financial risks and therefore should be allowed more flexibility in managing 638 activities.

IHS and Indian tribes agree that the major obstacle to increased self-determination contracting is inadequate funding. The Self-Determination Act states that a tribal contractor should receive funding equivalent to what IHS itself spent on providing the services in question. IHS's estimate of this amount (referred to as the "Secretarial level of funding"), however, does not always satisfy tribal contractors, who argue that they have legitimate operating costs that are not included in the IHS estimate. "Indirect costs" is the term most often heard in this debate, and malpractice insurance costs are the most frequently cited example.

When the Self-Determination Act became law in 1975, it was anticipated that tribes would be able to operate service programs more efficiently than IHS, and therefore be able to expand services or to cover additional operating costs such as liability insurance. Some of the first 638 contracts received additional indirect or administrative overhead costs, and IHS sometimes has provided additional support when funding was available; but in recent years, there have been no IHS appropriations for the indirect costs associated with 638 contracts. Many tribal contractors believe that the total contract award, which IHS contends covers both direct and administrative costs (IHS's total cost of service delivery), is inadequate and, in effect, forces the contractor to reduce services in order to cover essential administrative costs.

Another issue concerns IHS area office staff as tribal contractors assume responsibility for more IHS services. When a tribe contracts to operate an IHS facility or service unit, it may simply transfer most of the IHS staff to tribal employment. Some tribal contractors believe, however, that as their own management capabilities grow, IHS area office staff should be reduced and part of the savings in personnel costs earmarked for 638 contract administrative expenses and additional services. IHS responds that area office staff must be maintained because developing and monitoring 638 contracts require as much or more effort than was needed when IHS delivered services directly. Another reason cited by IHS is that tribes may turn back their self-determination contracts to IHS with 120 days' notice (retrocession), and IHS must be prepared to resume program management. The future of the IHS self-determination program will depend to a large extent on how these issues are resolved.

## **IHS Implementation of the Self-Determination Program and the Response of Indian Tribes**

### **IHS Program Implementation**

The Self-Determination Act and the regulations that govern its implementation in IHS state that grants or contracts maybe awarded to tribes and

tribal organizations “to carry out any or all of the functions, authorities, and responsibilities of the Secretary of Health and Human Services under the Act of August 5, 1954” (the Transfer Act, as amended) (42 CFR Subpart I 36.201). The use of cooperative agreements, which are similar to grants, was authorized in 1984 by an amendment to the law; but no cooperative agreements had been used in IHS as of the end of 1985,

IHS programs implemented pursuant to the 1976 Indian Health Care Improvement Act, such as the Indian health manpower scholarship programs and urban Indian health projects, are not subject to self-determination contracting because they were not among the functions conveyed to DHHS by the Transfer Act. Furthermore, it is the IHS position that the administration and support responsibilities of IHS headquarters and area offices usually are not contractible, because such functions are difficult to associate with specific tribes (60).

Although IHS regulations provide that tribes may administer the same types of health programs either by grant or by contract, the grant component of the IHS self-determination program has never been very large. Grants may be awarded to tribes to administer health services, subject to annual renewal. One-year grants are also available to develop tribal management capabilities such as personnel and accounting systems, for feasibility studies to help tribes determine whether or not they should contract a service, and for tribal health planning activities (42 CFR 36 Subpart G). IHS 638 grants have not exceeded 10 percent of annual combined tribal health contract (including Buy Indian contracts) and grant expenditures (see table 6-1 and figure 6-1). In fiscal year 1984, grants for the self-determination program represented only \$16.5 million, or 8.5 percent, of the total \$194 million obligation.

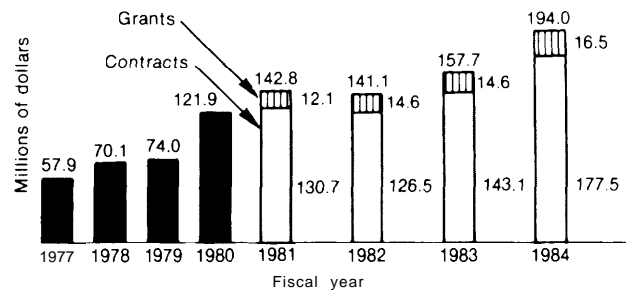
Contracts have been the predominant means of transferring IHS health programs to tribal management. In some IHS areas, such as Nashville and California, tribal organizations contracted to deliver health services well before the Self-Determination Act became law. Some contracts that predated self-determination, such as those executed under the Buy Indian Act of 1910, have since been converted to 638 contracts. Most tribes

**Table 6-1.—IHS Tribal Health Contract and Grant Obligations, Fiscal Years 1975-84<sup>a</sup>**  
(millions of dollars)

Fiscal year	Total	Contracts	Grants
1984 . . . . .	\$194.0	\$177.5	\$16.5
1983 . . . . .	157.7	143.1	14.6
1982 . . . . .	141.1	126.5	14.6
1981 . . . . .	142.8	130.7	12.1
1980 . . . . .	121.9		
1979 . . . . .	74.0		
1978 . . . . .	70.1		
1977 . . . . .	57.9		
1976 . . . . .	32.6		
1975 . . . . .	17.4		

<sup>a</sup>Report complete as of Feb 1, 1985. Contracts include both 638 and Buy Indian contracts. Grant obligations are shown separately for the first time in 1981.  
SOURCE: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, *Chart Series Book*, April 1985, published as table 52 from TRAIS Contracts Data Base, Management Systems Development Branch IHS

**Figure 6-1.—IHS Tribal Health Contract and Grant Obligations, Fiscal Years 1977-84<sup>a</sup>**



<sup>a</sup>Report complete as of Feb 1, 1985. Contracts include both 638 and Buy Indian contracts. Grant obligations are shown separately for the first time in 1981.  
SOURCE: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, *Chart Series Book*, April 1985, published as figure 52, from TRAIS Contracts Data Base, Management Systems Development Branch

seem to prefer contracts to grants, possibly because they are familiar with the long-standing Buy Indian contract program. In addition, grants may be perceived as reflecting the relationship of a superior entity, in this case the Federal Government through IHS, to a lesser one, the Indian tribe; whereas a contractual relationship is often seen as an agreement between equally responsible parties and more appropriate to a government-to-government transaction (87).

As noted earlier, the intent of the Self-Determination Act is for IHS to facilitate 638 contracting. The law directs the Federal Government to

assist tribal governments in developing necessary management capabilities; to provide technical assistance to tribes in preparing contract proposals; and to enter into all contracts that are proposed unless specific conditions for denial can be documented (e.g., that services would not be provided in a satisfactory manner, or that trust resources would not be adequately protected) (42 U.S. C. 2001). A tribal 638 contractor with cause may return a project to IHS management with 120 days' notice. IHS, on the other hand, may not rescind a 638 contract without first working with the tribe to correct deficiencies and allowing for tribal appeals, except where there is an immediate threat to life or safety (42 CFR 36.231-36.234).

Table 6-1 shows that tribal health contract and grant activities increased from \$17.4 million in fiscal year 1975 to \$142.8 million in 1981 and \$194 million in 1984 (tables 6-1 and 6-2 combine obligations for IHS self-determination and Buy Indian contracts). In fiscal year 1984, total IHS obligations to tribes for 638 contracts, Buy Indian contracts, and 638 grants (\$194 million) amounted to 30 percent of the IHS clinical services budget of \$645.5 million. As shown in table 6-2 and figure 6-2, the primary use of 638 and Buy Indian contract funds in fiscal year 1984 was health services delivery (\$111.4 million, or about 63 percent of total contract obligations of \$177.5 million).

**Table 6-2.—IHS Tribal Health Contract and Grant Obligations by Tribal Activity, Fiscal Year 1984<sup>a</sup>**

Tribal activity	
Contract and grant total	\$193,953,186
Contracts total	177,479,579
Health department management	5,472,660
Health services delivery	111,352,779
Training	2,984,009
Other contracts	40,895,626 <sup>b</sup>
Indirect costs	16,774,505 <sup>c</sup>
Grants	
Projects	16,455,589 <sup>d</sup>

<sup>a</sup>Report complete as of Feb 1, 1985. Contracts include both 638 and Buy Indian contracts.

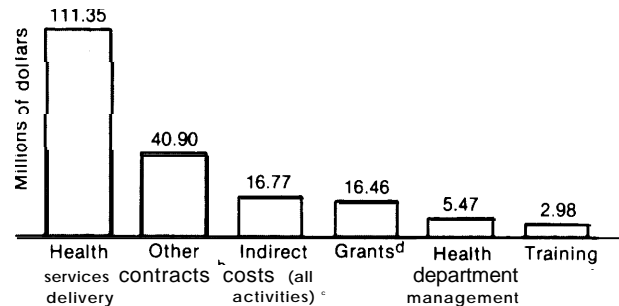
<sup>b</sup>Other contracts includes \$36,538,512 that has been reported but not assigned to a specific tribal activity as defined in this table.

<sup>c</sup>Indirect costs are shown separately and are not included in each tribal contract activity.

<sup>d</sup>The grants total includes scholarships, applied training and development, and study grants.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, *Chart Series Book*, April 1985, published as table 5.3, from TRAIS Contracts Data Base, Management Systems Development Branch, IHS, and PHS Grants Data System.

**Figure 6-2.—IHS Tribal Health Contract and Grant Obligations by Tribal Activity, Fiscal Year 1984<sup>a</sup>**



<sup>a</sup>Report complete as of Feb. 1, 1985. Contracts include both 638 and Buy Indian contracts.

<sup>b</sup>Other contracts includes \$36,538,512 which has been reported but not assigned to a specific tribal activity as defined in this figure.

<sup>c</sup>Indirect costs are shown separately and are not included in each tribal contract activity.

<sup>d</sup>The grants total includes scholarships, applied training and development, and study grants.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, *Chart Series Book*, April 1985, published as figure 5-3, from TRAIS Contracts Data Base, Management Systems Development Branch, IHS and PHS Grants Data System

Indirect costs amounted to 9.5 percent of total contract awards.

Table 6-3 presents data for self-determination contracts only, by IHS area, obtained from IHS by special request. These data indicate that 638 contracts represented about 85 percent (\$152.4 million) of the \$177.5 million in 1984 IHS contract obligations, while Buy Indian contracts represented 15 percent (215).

The data in table 6-3 also suggest that in fiscal year 1985, Indian tribes administered more than \$141 million under 638 contracts. The 1985 IHS clinical services budget (excluding funds for IHS headquarters operations in Rockville and data processing in Albuquerque) was \$637 million. Of this amount, \$164 million (26 percent) was spent on IHS contract care and \$473 million (74 percent) was spent on IHS direct services. There are some inconsistencies among IHS areas in how 638 contract funds are accounted to direct care or contract care budget components. However, if the \$141 million in 638 contracts (excluding Buy Indian contracts and 638 grants) was associated primarily with tribal management of direct care rather than contract care services, it would represent 30 percent of the direct care budget and 22



**Table 6-3.—IHS 638 Contract Activity by Area, Number, and Dollar Amount of Contract Awards, Fiscal Years 1979-85<sup>a</sup>**

Areas	Fiscal year						
	1979	1980	1981	1982	1983	1984	1985
Aberdeen . . . . .	\$ 1,897,575 1	\$ 2,708,968	\$ 6,680,295 35	\$ 11,048,649 39	\$ 12,153,028 72	\$ 13,284,084 43	\$ 13,038,422 40
Alaska . . . . .	10,959,839 12	5,875,003 22	22,654,392	20,913,797 35	29,859,667 31	38,703,156 22	26,341,939 19
Albuquerque . . . . .	1,083,818 8	2,292,582 16	2,562,057 21	1,919,462 14	2,715,689 20	2,763,060 21	2,252,020 20
Bemidji . . . . .	988,501 12	9,452,364 51	11,729,119 87	17,557,043 97	19,353,373 96	21,729,906 86	17,310,251 52
Billings . . . . .	—	469,660 2	672,072 3	2,681,906 16	4,063,432 25	4,057,974 25	4,916,113 23
California . . . . .	232,110 5	1,371,537 9	6,539,696 26	7,645,647 26	16,893,751 36	14,561,825 39	20,784,286 24
Nashville . . . . .	2,949,131 16	6,306,963 15	14,659,016 23	12,753,153 15	14,840,895 20	20,235,864 19	20,212,334 16
Navajo . . . . .	—	—	—	30,995 1	65,168 1	101,771 1	280,148 1
Oklahoma . . . . .	2,215,899 21	3,267,578 19	4,383,351 24	8,803,967 39	8,124,916 47	13,316,233 46	12,882,942 57
Phoenix . . . . .	1,908,716 10	3,204,994 24	5,218,661 37	4,767,554 41	6,789,882 58	8,611,486 61	6,923,748 52
Portland . . . . .	411,841	6,904,598 57	8,707,341 74	9,513,176 71	9,697,788 98	12,646,744 85	13,740,282 75
Tucson . . . . .	967,51? 10	1,762,163 11	1,937,122 11	1,619,297 13	1,794,369 6	2,402,507 9	2,394,639 5
IHS total . . . . .	\$23,614,947 104	\$43,616,410 234	\$85,743,122 374	\$99,254,646 407	\$126,351,958 510	\$152,414,610 457	\$141,077,124 384

<sup>a</sup>The numbers of contracts are total contracts active during the fiscal year, combined new and renewal contracts. Dollar amounts are total awards including funding modifications and indirect costs.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, TRAIS data system, as reported from Albuquerque Data Center to IHS Office of Tribal Activities, Division of Indian Resource Liaison, summary sheets received 11/12/85.

percent of the total \$637 million IHS clinical services budget.

In spite of contract regulations and procedures that have been modified in favor of tribes, comments from tribal organizations and IHS staff around the country suggest that some tribes believe the risks and problems of self-determination contracts outweigh the advantages. Some of these problems are discussed later in this section.

**Tribally Operated Health Programs**

The numbers and types of health programs administered by the tribes under self-determination vary substantially among IHS areas. The numbers of 638 contracts by area, with dollar awards, have been summarized in table 6-3. (Detailed lists of 638 contracts active as of March 1985 have been tabulated from IHS sources and displayed by tribe, service unit, State, and IHS area office; these are available from OTA. )

Some of the more traditional reservation-based tribes in areas with well-established, comprehensive IHS direct care programs (especially, hospitals and clinics) have not been active in 638 contracting. The Navajo tribe is an example. This is the largest single tribe served by IHS, with an estimated IHS service population of 166,493 in 1985. Although the Navajo tribal government has considerable administrative expertise, 638 contracting plays virtually no role in health care delivery for the Navajo. The tribe manages only one IHS 638 contract for the community health nursing program. In the Albuquerque area, only 2 of 22 health clinics are tribally operated, and the other 638 contracts are for specific programs such as community health representatives, alcoholism, otitis media, speech and hearing problems, and mental health. This pattern applies in general to the Aberdeen, Billings, Phoenix, and Tucson IHS areas (with the exception of the Pascua-Yaqui prepaid plan in the Tucson area).

The Oklahoma City IHS area differs somewhat from IHS areas identified above, but it is closer to them than to other areas more active in 638 contracting. There is an extensive IHS direct care system in Oklahoma, and the entire State is designated a contract health services delivery area. There are seven Indian hospitals in the Oklahoma IHS area, five operated by IHS and two, the Creek Nation hospital at Okemah and the Oklahoma Choctaw hospital at Talihina (as of January 1985), operated under 638 contracts. Oklahoma area IHS hospitals are larger, newer, and offer a wider range of inpatient services (including surgery) than the typical IHS hospital. The health clinics in the Oklahoma City IHS area are predominantly IHS operated. Many of the Oklahoma tribes manage 638 contracts, but most are relatively small contracts for specific services.

In contrast to the IHS areas just mentioned, in which 638 contracting is relatively unimportant to the overall Indian health care system, are the IHS areas of Alaska, California, Bemidji, and Nashville. Each of these areas has a relatively recent and unique relationship with IHS.

The approximately 73,000 Alaska Natives are served by seven hospitals of varying sizes and capabilities, including the IHS medical center at Anchorage. The hospitals at Nome (Norton Sound), Dillingham or Kanakanak (Bristol Bay), and Mt. Edgecumbe (Southeast Alaska, as of January 1986) are tribally operated. In addition, the Alaska Native Health Corporations contract under 638 to operate substantial components of the IHS system. In fiscal year 1984, the native corporations managed about \$39 million (38 percent) of the area's total clinical services budget of nearly \$102 million (see table 6-3 and app. C). Two entire service units and a number of facilities (including 3 of 8 health centers and all 173 village clinics) are administered by Alaska Natives. Despite requirements of the 638 contract application process that pose particular problems in Alaska (discussed below), Alaska Native Health Corporations seem determined to take over management of their health service systems.

In the California, Bemidji, and Nashville IHS areas, many Indian groups live in small, scattered bands and rancherias. Tribes in these areas generally do not have reservations and may, at best,

have limited tribal trust land bases. A relatively large number of these tribes have had their Federal recognition reinstated only recently. In these areas, tribally operated 638 programs are an important part of the IHS system.

The California area has no IHS direct care facilities (the Yuma IHS hospital is physically located in California, but it is administered by the Phoenix area office). IHS services are provided entirely through 638 contracts with the many California tribes, which are grouped into 20 projects equivalent to service units. The bulk of 638 funding in California goes to tribally operated clinics and health stations that deliver ambulatory health services.

The Bemidji area has two IHS direct care hospitals. Half of the area's health clinics are tribally operated, and nearly every tribe administers at least one 638 contract for a specific service such as community health representatives or substance abuse. Some tribes also administer comprehensive health delivery and sanitation 638 contracts.

IHS historically has not had a major presence in the Eastern United States. The Nashville program office was separated from the Oklahoma City area office in 1971 and now serves 16 small tribes dispersed throughout the eastern one-third of the country. Several of these tribes have regained Federal recognition since 1980. Because of limited IHS staff and the geographic dispersion of tribes in the Nashville area, most IHS services are delivered through comprehensive 638 contracts. The contracts range in scope from the tribally operated Choctaw hospital in Philadelphia, Mississippi, to limited health referral services.

The Portland IHS area is similar to the California, Bemidji, and Nashville areas in that it is characterized (with a few exceptions) by relatively small tribes with limited land bases. Several tribes in the Portland area have regained Federal recognition recently. There are no hospitals in the Portland area operated either by IHS or by tribes. Four of 16 health centers and 13 of 21 health stations in the Portland area are tribally operated. Unlike tribes in the California, Bemidji, and Nashville areas, Portland area tribes are less likely to administer comprehensive health service 638 contracts. Most of the 638 contracts are for specific

health services such as community health nursing, community health representatives, and substance abuse. The two tribes that contract under 638 to administer their own contract care programs do so in compliance with Portland area office guidelines.

It is clear from reviewing 638 contract activities in the 12 IHS areas that responses to the self-determination program have varied among tribes around the country. Differences are apparent both in the amounts (number of contracts, dollar awards) and in the types of health services that are contracted by the tribes. Questions might be raised over how many of the 638 contracts represent actual takeovers of health program management and how many are essentially transfers of administrative responsibility. Some of the problems and issues involved in 638 contracting that may affect a tribe's decision to contract or not to contract are discussed below.

### Issues Related to Contracting Under the Self-Determination Act

A central issue in this analysis concerns IHS's implementation of the Indian Self-Determination Act in relation to the intent of the law as passed by Congress. Congress sought to support tribal governments and to encourage more active participation by Indian tribes and tribal organizations in the delivery of IHS services. Although Congress and many American Indian groups view self-determination as an opportunity for Indian tribes to exercise greater influence over services provided to them, IHS appears to focus primarily on the contract administration aspects of the self-determination program. These different approaches may account for some of the difficulties that have arisen between IHS and Indian groups in carrying out the provisions of the self-determination legislation.

The following discussion deals with issues related to self-determination as implemented by IHS. The specific areas of discussion include IHS implementation policies and procedures at IHS headquarters and area office levels; the adequacy of funding for 638 contracts; and tribal experiences in administering 638 contracts.

### IHS Policies and Procedures for Implementing 638 Contracts

In the view of some participants, IHS has not shown a clear commitment to achieving Indian self-determination. Perhaps the reason that IHS has not been aggressive in implementing the program is because some tribes continue to suspect that self-determination may be a means of reducing Federal responsibility for Indian health. IHS self-determination regulations include the following statement (42 CFR Subpart I 36.201 (a)(4)):

It is the policy of the Secretary to continually encourage Indian tribes to become increasingly knowledgeable about Indian Health Service programs and the opportunities Indian tribes have regarding them; however, it is the policy of the Indian Health Service to leave to Indian tribes the initiative in making requests for contracts and to regard self-determination as including the decision of an Indian tribe not to request contracts.

IHS has been criticized by some Indian organizations for not moving as quickly as it might have to support tribal interests in 638 contracting. Uncertainties about IHS headquarters' policies and the delegation of administrative responsibility to the area offices have resulted in variations among IHS areas, both in 638 contract application procedures and in monitoring contracts awarded to the tribes.

The 638 Contract Application Process in IHS.—The Self-Determination Act directs IHS to provide technical assistance to tribes in developing 638 contract proposals and to approve all such proposals unless specific grounds for denial can be documented.

Resolutions of support for a 638 contract proposal must be obtained by the prospective contractor from all affected tribes (42 CFR Subpart I, 36.206). This requirement may not be a concern in areas where a health program serves only one tribe, but in areas such as Alaska, where many native villages are served under a single Alaska Native Health Corporation, obtaining resolutions of support from 100 percent of the villages can be an obstacle. In some instances, Alaska villages have bargained for other unrelated benefits by withholding their support for a 638 contract proposal (67). A similar situation exists

in California, where Indian bands are affiliated with health consortiums that deliver services through 638 contracts. A tribe may change its affiliation apparently at any time, and such changes disrupt program administration and funding throughout the area (9).

Another significant problem in developing a 638 contract application, according to tribal organizations, is the reluctance or inability of IHS area offices to provide adequate cost data on existing IHS operations. Cost data are essential to the tribes in order to develop their financial management plans for a project; however, IHS does not maintain an internal cost-accounting system and so cannot provide data in the detail that would be expected by a private organization developing a management contract for a hospital or clinic. When IHS has not been able to identify the costs associated with a project to the satisfaction of the potential tribal contractor, disputes have resulted. As will be discussed in relation to 638 funding issues, a tribe is entitled to the same level of funding that IHS would have committed to provide the service directly.

**IHS Monitoring of Self-Determination Contracts.**—Once a tribe signs a 638 contract to manage a particular health service, IHS responsibilities for that service shift from direct delivery to program monitoring and contract administration. The staffing levels of IHS area offices have not declined as direct delivery functions have been transferred to the tribes because, according to IHS, 638 contracts require substantial monitoring. In addition, regulations provide that tribes may return a contract to IHS responsibility with 120 days' notice. Tribal contractors, on the other hand, argue that unnecessary personnel in IHS area offices absorb funds that should be made available for 638 contracts.

The suggestion that 638 contract administration creates special demands on IHS staff is plausible, given the differences between 638 contracting requirements and other Federal contracting requirements. In the case of Federal fixed-cost or cost-reimbursement contracts, an arm's length relationship between the Government and the contractor is required. The Government may order changes in contract scope unilaterally and may terminate the contract at its convenience, while

the contractor may not. Federal labor laws and equal opportunity provisions also apply to the contractor. In the case of self-determination contracts, however, these requirements are modified: IHS is directed to assist tribes in developing 638 contracts; all changes in a 638 contract require the consent of the contractor; the Government may reassume management of a 638 contract only for specified reasons, but the contractor may turn back a 638 contract with 120 days' notice; employees of tribal 638 contractors are not subject to certain Federal labor laws; and Indian preference in employment and training supersedes equal opportunity rules. In addition, tribal 638 contractors enjoy exemption from bonding requirements (42 CFR Subpart I, 36.223) and may carry over unspent contract funds to the following year (42 CFR Subpart I, 36.236) (187).

IHS regulations for 638 grant and contract administration were published in November 1975 (42 CFR 36 Subparts H and I). Since 1981, IHS headquarters has provided additional guidance on specific points in the form of Indian self-determination memoranda. Nonetheless, variations among IHS areas appear to be common when it comes to the application of 638 contracting policies and procedures. IHS decisionmaking on 638 applications and contract management questions sometimes is viewed by tribal contractors as arbitrary and capricious; and tribes have complained that the appeals process is not adequate (68).

In some IHS areas, such as Nashville and California, many of the 638 contracts are written for ambulatory clinic management and comprehensive health service programs. In such cases, it may be desirable to allow tribal contractors as much flexibility as possible to operate their programs within the terms of their contracts. That is the explicit policy of the Nashville IHS area, where IHS staff also believe there should be routine contract audits for effective financial monitoring and accurate indirect cost determinations (84). In the Portland area, by contrast, individual 638 contracts are strictly defined and monitored by IHS area office personnel from their initiation. IHS staff in some area offices believe tribes occasionally seek to expand services beyond the scope of their 638 contracts. For example, contractors may incur unauthorized costs by hiring additional staff

whose services may not be directly related to the contract (84).

**Health Facilities Construction Under 638 Contracts.**—IHS regulations implementing Public Law 93-638 permit tribal construction of health facilities under grants or contracts (42 CFR 36 Subparts H and I), but facilities construction has not been a major component of the 638 program. Perhaps five or six 638 construction grants were awarded for staff quarters and one clinic before 1982 (16), when the Public Health Service (PHS) decided to allow facilities construction by contract only. This was because construction under a grant might be interpreted as conferring facility ownership (60). The first clinic constructed under a 638 contract was built by the Menominee tribe, and between 5 and 10 IHS clinics now have been constructed by tribal contractors. The first hospital constructed under a 638 contract was at Red Lake, Minnesota. At the end of 1985, two hospitals were in the planning and construction stages as 638 projects: one in Kakanak (Dillingham), Alaska, and one in Rosebud, South Dakota (16).

The limited amount of facilities construction that has been authorized under the self-determination program reflects the opposition of PHS and the Health Resources and Services Administration (HRSA), the agencies in which IHS operates, to any construction of new Indian health facilities. Concerns have been expressed in HRSA about inadequate monitoring of 638 facilities construction and about the difficulties that may arise if a tribal contractor does not adhere to contract terms regarding facility size and service capabilities (117). Finally, tribes may collect a contract management fee for overseeing 638 construction subcontractors, which is seen by Federal administrators as unearned profit.

**The Cost-Reimbursement Contract in the 638 Process.**—Much of the dissatisfaction that is voiced by tribal 638 contractors about IHS area office contract administration centers on the contract format itself and inconsistencies in the interpretation of Federal contracting regulations. Many tribes regard the voucher reimbursement system that IHS applies in 638 contract management as unnecessarily time-consuming, inflexible, and restrictive. The question then arises whether the cost-reimbursement contract is the most suitable

means of transferring responsibility for services delivery from the Federal Government to Indian tribes.

Another type of instrument—the cooperative agreement—was introduced by the Federal Grants and Cooperative Agreement Act of 1977 (Public Law 95-224). Public Law 95-224 did not apply specifically to the Indian self-determination process, but a technical amendment to Public Law 93-638 in 1984 provided that cooperative agreements could be used, if mutually acceptable to IHS and the tribes. Tribes in some areas, particularly in the Southwest, are interested in cooperative agreements as a more flexible alternative to standard contracting. IHS and HRSA officials point out, however, that cooperative agreements are like grants in that they allow the Government (not the tribes) more discretion than is permitted in a contract to modify the products, timeframes, and funding levels of the project (87). It appears that the more discretionary cooperative agreements are a sensitive subject, because they may be viewed by some tribes as another step toward termination. A few years ago, BIA proposed to convert its 638 contracts to cooperative agreements, but so many tribes opposed the change that it was abandoned. Contracts, for all their difficulties, are preferred by many tribes because they are legally binding agreements between parties of relatively equal stature (in the case of 638 contracts, between the Federal Government and tribal governments). IHS has considered the use of cooperative agreements but has not as yet adopted a formal policy on the subject, and it is unlikely that any cooperative agreements will be used by IHS in fiscal year 1986 (87).

Another instrument that is authorized under separate legislation (Public Law 86-121), the memorandum of agreement, is unique to IHS environmental health and sanitation projects. Memoranda of agreement usually specify the terms of cooperation between IHS and a tribe or tribes in completing sanitation projects. IHS's general counsel has ruled that memoranda of agreement projects are exempt from the Federal Davis-Bacon union wage scale requirement, and this is an important consideration because tribes often cannot pay union scale.

### The Adequacy of Funding for 638 Contracts

Currently, there are significant financial disincentives to 638 contracting; many tribes believe that funding levels set by IHS for 638 contracts are inadequate. Some tribes argue that the cost data on which IHS determines its contract awards may be inadequate or incorrect; and tribal contractors may not feel confident in judging the adequacy of a proposed 638 contract amount, because they cannot obtain sufficiently detailed and reliable cost accounting data from IHS. In addition, 638 contracts are for a fixed amount, and tribal contractors are responsible for actual costs in excess of that amount.

The larger and more comprehensive the health service activities managed by 638 contract, the greater the financial risks to tribal contractors. This situation may explain in part why relatively few comprehensive contracts have been negotiated and why the majority of tribes prefer to manage small, limited-service contracts. Specific service programs also may be more attractive to tribal contractors because they require less-specialized management expertise, frequently are add-ons to existing IHS services, and offer employment opportunities at relatively low financial risk to the tribe.

The financial risk factor is especially acute in tribally operated contract care programs, where unpredictably high-cost cases can make budgets difficult to control. The catastrophic health emergency fund proposed in recent legislation would include 638 contract care programs in its coverage. At present, however, tribes that manage their own contract health services under 638 contracts must follow area office regulations in order to qualify for the area's catastrophic care contingency fund, if available (as in Alaska, Portland, and the Oklahoma City IHS areas); make special provision for the catastrophic coverage part of the 638 contract; aggressively collect third-party payments to supplement IHS funding; or deny contract care authorizations for costly emergency services.

The most frequently voiced tribal complaint about funding has to do with administrative or indirect costs. This issue often is raised when the costs to a tribal 638 contractor of providing a par-

ticular health program exceed the costs attributed to that program by IHS. A number of factors are involved in this problem. Tribal 638 contractors may have legitimate costs that are not required of IHS at the area or service unit level. For example, central IHS support services (e.g., legal and accounting resources, budget development, procurement and contract administration, specialized technical assistance, data collection and processing, and facilities planning) are not likely to be charged to local service programs. Managers of 638 programs may have to purchase these needed services from the private sector at additional cost. IHS cannot authorize contractors to purchase facilities if no funds have been appropriated specifically for that purpose; hence contractors may be obliged to lease facility space at higher cost.

Medical malpractice insurance is frequently cited by the tribes and by IHS as a significant problem for 638 contractors. Medical professionals employed by the Federal Government are covered by the Federal Tort Claims Act; but programs operated by the tribes need separate malpractice insurance for their medical professionals, because Indian tribes have sovereign immunity against suit (60). Tribal contractors also have difficulty matching the fringe benefits available to Federal employees, such as life and health insurance and retirement plans, because of the cost of purchasing those benefits in the private sector.

Although Public Law 93-638 does not specify that tribal contractors should receive direct and indirect costs, IHS self-determination regulations do address the issue. The basic guideline regarding 638 contract funding levels is expressed as the "Secretarial level of funding" (25 U.S.C. 450j), and the IHS regulation states: "The tribal organization shall be entitled to be funded for direct and indirect costs at a level which is not less than would have been provided if the IHS had operated the program or portion thereof during the contract period" (42 CFR 36.235). Allowable indirect costs are defined in Federal contract general provisions, but different interpretations can result from variations in accounting systems and definitions.

No research has been done in IHS to identify the actual range of 638 contract indirect costs or

to determine what would be reasonable. Although some of the earlier 638 contractors received indirect costs from IHS through additional appropriations (as is still the case for BIA 638 contracts), such funding has been reduced or eliminated. Tribes object to the inequities that have resulted from this change. As a result, tribal contractors believe they now are expected to *cover* indirect costs out of their direct service funds, thus reducing the level of services they can provide, which is contrary to the intent of the Self-Determination Act (134).

A recent example of a dispute involving indirect costs was the disagreement between IHS and the Southeast Alaska Regional Health Board over the board's proposal to manage the Mt. Edgecumbe hospital. The disagreement, which was the first case ever to reach the IHS declination appeals board (in April 1985), centered on the amount of the contract award. The board argued that as a 638 contractor, it should receive all IHS costs attributable to the hospital, including the share of Alaska area office functions (e.g., claims processing and accounting), that supported hospital operations. The native group sent an accountant to the IHS area office to review records and estimate administrative costs associated with the Mt. Edgecumbe hospital. When the area office stated it did not have adequate funds to cover the amount requested by the native group and it would not enter into a 638 contract, the board appealed that decision. Despite questions raised by the Alaska Natives about the declination appeals process itself, the appeal was denied (68). Following negotiations between IHS and the Southeast Alaska Regional Health Board over the course of 1985, an agreement was reached on the contract funding level and the Mt. Edgecumbe hospital and service unit were transferred to board control in January 1986 (33).

#### Tribal Administration of 638 Contracts

Tribes have widely different attitudes about 638 contracting. Many tribes in the Alaska, California, Bemidji, and Nashville IHS areas are enthusiastic about self-determination. In other areas, such as Aberdeen, fears of termination of the Federal responsibility for Indian health persist. Other tribes may recognize no compelling reasons to

change, particularly in view of the financial risks of 638 contracting.

In addition to the financial difficulties of 638 contracting, administrative considerations may discourage tribal participation. Managing a health program or facility, especially in the first years of a 638 contract, may impose unexpected demands on tribal employees. In addition to responsibilities for developing and administering personnel functions and employee benefits plans, tribal government and contract staff are likely to find new Federal reporting requirements associated with the contract.

The responsibility for collecting third-party reimbursements transfers from IHS to tribal staff with a 638 contract. Depending on the efficiency of previous IHS collection systems and the nature of relations with the payers, this transition may be more or less difficult. Delays in collections quickly have an adverse effect on cash flow and, consequently, on a project's ability to deliver services.

The third-party reimbursement situation is further complicated in California, where 638 programs traditionally have served significant numbers of unaffiliated Indians and unknown numbers of non-Indians. California 638 contractors recently have undergone extensive audits to determine whether Federal funds have been expended on services for non-Indians (43). IHS's opinion is that a 638 contract is an extension of IHS itself, and this relationship requires a separation of funding and services to Indians and non-Indians, even in areas such as California where the distinctions are not always clear.

When a 638 contract includes operation of an IHS facility, tribal contractors maybe justifiably concerned about the physical condition of the facility and the prospects for securing IHS funds for major renovations or facility replacement, if necessary. Because it was not clear whether tribally operated facilities would be eligible for renovation and replacement under the same priority system that applies to IHS direct care facilities, the Senate version of the 1985 Indian Health Care Improvement Act provided for inclusion of 638 contract facilities in the IHS facilities construction program.

One of the most difficult management problems confronting a 638 contractor is project staffing. Many IHS delivery sites are so isolated that staff recruitment and retention are difficult regardless of available funding, and the programs may depend on PHS Commissioned Corps and National Health Service Corps placements to fill medical positions. When such programs transfer to tribal control under 638 contracts, the tribes may choose to hire Federal employees already at the site. If this is not successful, however, tribal contractors may have difficulty recruiting private health professionals. Some tribes also may find it difficult to retain Federal or private employees due to an inability to match Federal salaries and fringe benefits, the uncertainties of tribal politics, or other reasons.

Tribal 638 contractors have several staffing options when they assume operation of an IHS health facility, service unit, or service program. At the time of the initial 638 transfer (and at that time only), tribal contractors may acquire IHS employees under special Intergovernmental Personnel Act (IPA) agreements. Under the conditions of these special IPAs, staff members remain Federal IHS employees, retain Federal benefits, and answer to both a Federal and a tribal supervisor. These IPAs have no time limit and can be extended indefinitely at the agreement of the tribe, the employee, and IHS. Special IPAs are the most frequently used means of staffing 638 contract programs. (For example, the transfer of 180 IHS employees from the Mt. Edgecumbe hospital and service unit to tribal control was accomplished with special IPAs.) After the initial 638 takeover, tribes may obtain the services of Federal employees under regular, 2-year time-limited IPAs (renewable for a total of 6 years). Tribes may terminate IPA employees at any time. In another option that effectively is the same as an IPA, PHS Commissioned Corps may be assigned to 638 contractors under memoranda of agreement (33).

A second important means of staffing 638 facilities and programs is by tribal direct hiring of former Federal employees. The employee must resign from his Federal position before being hired by the tribal contractor but may retain his Federal benefits if the tribe agrees. In most cases, direct-hire employees switch to tribal government

benefit plans. (The 638 transfer of the IHS hospital at Talihina, Oklahoma, to the Oklahoma Choctaw tribe in January 1985 primarily involved the direct hire of former Federal staff.) Tribes may also direct hire non-Federal outside staff (33).

Tribal control of 638 project staff has its advantages. Federal employees may be retained selectively, and tribes may terminate IPA and direct-hire employees at any time. Tribes may hire new staff from the Indian community, thus providing needed jobs (this can be an important consideration for both economic and political reasons). Local Indians who are IHS employees, however, may not always be eager to transfer from Federal to tribal government control because of reduced job security and fringe benefits.

IHS regulations require that contracts awarded under the Self-Determination Act incorporate a clause requiring Indian preference in employment and training (42 CFR 36.221). This clause, however, is less restrictive than the Indian preference requirement for IHS employees, because it permits 638 contractors to hire non-Indians after giving full consideration to Indian applicants (42 CFR 36.41). Most tribes prefer not to be bound by Indian preference in employment and training.

## Conclusions

Tribal governments and IHS both acknowledge frustrations with the self-determination program, but there have been no suggestions that it be abandoned. Some tribes think IHS should provide stronger leadership to achieve the goals of self-determination, together with clear policy guidance to the area offices in their application of contracting and procurement regulations to the special needs of 638 projects. Applying Federal regulations too strictly can create administrative and reporting problems for tribes as they attempt to manage their service delivery programs. Serious cash flow problems can result from the inevitable delays of the IHS voucher reimbursement system. Some tribes that now manage 638 contracts complain of inadequate technical assistance, lack of expertise, and inconsistent, uninformed decisionmaking at the area office level. IHS area staff, on the other hand, reply that they are required to spend a great deal of time educating tribal staff,



who may change frequently, in the policies and procedures of 638 contract management. The in-depth study by GAO of IHS 638 contract administration, which will be reported in 1986, should provide current, detailed information for the objective evaluation of many of these issues.

The level of funding necessary to support tribal 638 health programs, discussed above, has been debated since the act became law. With IHS budgets now stable or undergoing reductions, funding for 638 contracts may become an increasingly serious problem. The most frequently debated complaint about IHS self-determination funding is that it does not adequately compensate tribes for necessary indirect or administrative costs.

Many of the specific points at issue between Indian tribes and IHS are tests of a question central to the self-determination program: Who is in control of a 638 project? opinions naturally differ, depending on the viewer's perspective. IHS implementation of self-determination tends to focus on contract administration responsibilities, while tribes look to 638 contracts as a means to more effective self-government.

IHS regulations state clearly that the self-determination law is not intended to alter existing eligibility criteria for IHS services. IHS 638 contract projects are considered extensions of IHS itself. If 638 contract projects are extensions of IHS, then IHS is responsible for administering the contracts on behalf of its parent agency, HRSA, according to Federal contracting and procurement policies specially adapted for the program. Tribal contractors are monitored by IHS to ensure that they adhere to the terms of their contracts, an approach that limits the flexibility of 638 contractors to modify the scope of services they have agreed to deliver or to redefine their service populations. IHS monitors and processes 638 contract financial records through its area offices, which have the primary role in the procurement and accounting aspects of contract management under the overall supervision of the HRSA financial management office.

If 638 programs are extensions of IHS, it also follows that they should be included with direct

care services in all IHS data systems. At the end of 1985, most 638 programs were not included in IHS data systems. Many tribal contractors, given the option of using IHS data collection forms and processing systems or their own noncompatible systems, chose to use their own systems. Some 638 contracts specifically included data reporting requirements compatible with IHS systems, but area office staff found they lacked effective means of enforcing the requirements. As a result, IHS clinical services data are incomplete, because 638 contract data are not captured for all programs.

IHS staff in the Nashville area have stated that despite special efforts over the period of a year or more, they were unable to get IHS headquarters to include records from their 638 contractors in the contract care "piggyback" data system (84). IHS headquarters staff ascribe that particular problem to incompatible codes in the automated data records obtained from the tribes. As more Indian health services are provided under 638 contracts, this loss of clinical and management data will become an increasingly serious problem unless, as announced in a memorandum from the IHS Acting Director in fall 1985, comparable data reporting is required as a condition of funding for 638 contracts (50).

One consequence of administering Public Law 93-638 as a contract program and 638 contracts as extensions of IHS has been the retention of IHS headquarters and area office staff at virtually unchanged levels. The fact that IHS staffing has not declined as tribal 638 management responsibilities have increased is an issue with some tribes who believe, rightly or wrongly, that IHS staff duplicate tribal contract managers at the expense of additional funding that could be devoted to patient care. Maintenance of IHS staffing levels may be justified to some extent, however, by the 638 program provision that allows a tribe to return or retrocede a contract with only 120 days' notice. IHS argues that staff must be retained in case of such retrocessions and because of the administrative functions associated with monitoring 638 contracts. The retrocession provision could be revised so that a longer notice would be required, allowing for a more orderly transition and necessary staffing adjustments.

Many tribal governments are interested in self-determination as a means of gaining greater control over their own health services. The purpose of the program as they see it is not contracting per se (which has been an option since 1910 under the Buy Indian Act), but self-determination. Because the law and regulations state that tribal 638 contractors are entitled to the level of funding committed by IHS to the contracted services, a view has developed that each tribe has the right to a certain portion of the area budget and should be able to spend it as it sees fit.

From the point of view of self-determination, the 638 contracting process could be made simpler and more flexible than it is at present. Tribes contend, with reason, that self-determination contracts are not supposed to be administered exactly as other Federal contracts, Contract negotiation and monitoring procedures have been modified, and could be modified further by IHS and HRSA through regulations and Indian self-determination memoranda, to make the procedures more suitable to implementation of "a meaningful Indian self-determination policy which will permit an orderly transition from Federal domination of programs for and services to Indians to effective and meaningful participation by the Indian people in the planning, conduct, and administration of those programs and services" (42 CFR 36.201 (2)).

If tribal governments are to assume responsibility for program management, the tribes argue, they should have adequate authority and flexibility to succeed. Because 638 contract funds are relatively limited and may not cover all program administrative costs, tribal contractors believe they need greater flexibility to manage the programs effectively. If the contractors had more flexibility in program financial management (and perhaps some limitation of financial risk), they might be more likely to take over comprehensive health delivery programs instead of following the pattern seen in many areas, the management of multiple, small, limited 638 contracts. For some 638 projects, financial survival may depend on aggressive third-party payer collections and the ability to serve and bill all local users. In such cases, the issue of serving non-Indians is not one of proper use of IHS funds, but of the right of tribes to provide services to whomever they choose to augment health program revenues.

A variety of conflicts has developed over the 10 years of IHS implementation of the Indian Self-Determination Act. Rather than attempting to resolve each specific complaint, it would seem more reasonable for Congress, the Administration, and Indian tribes to work to clarify and reaffirm the intent of the law. If the intent is to promote Indian self-determination, defined as active, meaningful Indian participation in their health services systems, then the IHS contracting process should be modified further to serve that purpose, and efforts should be made to achieve greater consistency among IHS areas.

Another basic issue regarding the self-determination process remains to be considered: What would be the effects of Indian self-determination carried to an ultimately successful conclusion? What if most tribes were to contract to manage their entire service units? For one thing, integration of IHS-operated and tribally operated services would be a greater problem than it is today. What would happen to IHS headquarters and area office staff if 638 contracts were to increase from the current 20 to 30 percent of IHS clinical services to 50 percent or more? The status of Federal employees then would be a major concern.

The overall costs of greatly expanded tribal management of the Indian health care system should be considered. Each tribal contractor may find it necessary to duplicate at greater cost certain support functions that are now provided by IHS. To minimize costs, some support functions might be separated from direct care delivery and provided to tribal 638 contractors by special area-level organizations, like the present area offices, at lower costs than each contractor would pay individually. Areawide buyers groups could be organized to obtain discounts on supplies. Areawide 638 employee benefits packages and malpractice insurance plans could contribute to more cost-effective operations. Third-party collections and technical support also might be better provided at an area level. IHS area office staff could assume some of these roles. Areawide service staff would not have to be tribal employees, but tribal contractors should have a role in directing the support services.

The administrative problems of Indian self-determination that have been experienced by IHS and the tribes can be reduced by continued co-

operative efforts. Actions such as those briefly described above are implementation and management alternatives. Another management action would be to assume more responsibility for administering ongoing (renewal) self-determination contract programs directly from IHS headquarters, leaving area office staffs more time to provide technical assistance in 638 contract proposal

development and the implementation of new 638 contract projects. These and other actions could be considered more productively within a clarified policy framework that reflects a consensus of tribal organizations, IHS administrators, and Congress about the intent and objectives of the Self-Determination Act.

## RESOURCE ALLOCATION IN IHS

### Introduction

Most Indian tribes and all IHS area offices have opinions about the methods and results of IHS's approach to resource allocation: none of the areas is satisfied that it is receiving adequate resources. In part, this view reflects dissatisfaction with the overall level of IHS appropriations. In addition, however, there is a general belief that IHS is not allocating resources among its areas as equitably and cost-effectively as it could. These issues of equity, a rational basis for resource allocation, and the most cost-effective use of IHS's limited resources were debated at all of OTA's regional meetings.

The present distribution of IHS facilities, manpower, and programs among the 12 IHS areas is not the result of health systems planning. Instead, it has evolved over many years in response to congressional appropriations and directives and the administrative decisions of Federal agencies, especially BIA and IHS. Historically, Federal health services for Indians have been concentrated on the large, reservation-based Indian populations in the American West, and some of the smaller groups and tribes lacking Federal recognition have been neglected. IHS regulations state that it is not obligated to provide the same range and level of services in all IHS areas (42 CFR 36.11 (c)), because IHS is not a Federal entitlement program. The courts have determined, however, that if resources are not adequate to meet all needs, IHS is responsible for allocating available resources among its eligible population groups on a rational basis.

In order to support the existing network of facilities and programs, IHS allocates its annual ap-

propriations on the basis of "historical" or "program continuity" budgeting: that is, each area can expect to receive its base budget from the previous year, plus a share of funding increases equal to the percent increase in the IHS budget. Exceptions to this general allocation rule are made when Congress earmarks special program funds for certain areas, or when an area secures new IHS facilities that bring with them increased levels of staffing and support resources. The lack of coordination between the IHS facilities construction program and IHS clinical services reduces the cost-effectiveness of the overall system.

Resource allocations from IHS headquarters to its area offices are not based on the size of the service population, the relative health status and particular service needs of the population, the historical demand for services in the area, or the availability of alternate, non-IHS resources. Contrary to the perceptions of many tribes, the annual resource requirements methodology (RRM) application process, which estimates resource needs by service unit and area based on workload history and population projections, does not enter into the allocation formula except to distribute a small annual equity fund. Although IHS areas agree that the current resource allocation system is not satisfactory, they have not reached consensus on how the allocation formula should be revised.

The uneven, unplanned distribution of resources among the 12 IHS areas can be documented in a number of ways. Although tribes do not generally support a per capita approach to resource allocation, recognizing that the costs of health care and the mix of IHS direct, contract, and non-IHS alternate resources vary substan-

tially from one area to another, any analysis of per capita budget allocations results in a wide range of figures. The area populations applied in per capita calculations are subject to particular debate, because IHS uses estimates derived from the 1980 U.S. census which, it is argued, overcounts the Indian population in some areas and undercounts in others. Variations among the areas in determining who is eligible for IHS services also affect estimates of the base populations.

Table 6-4 shows that based either on the IHS census-based area service populations or on estimated user populations derived from other sources, per capita dollar resources are unevenly distributed among IHS areas. IHS service population estimates yield 1985 per capita allocations ranging from \$497 in the Portland IHS area to \$1,633 in the Alaska area. Four areas (California, Portland, Oklahoma, and Navajo) received per capita allocations below the IHS average, and Bemidji and Nashville were not far above average. Estimated IHS user population figures, on the other hand, resulted in a range of from \$552 per capita in the Navajo area to the high in Alaska. Areas below the IHS average per capita allocation were Oklahoma, Navajo, Portland, and Bemidji. Okla-

homa area per capita allocations were low, in part, because the entire State is a contract health service delivery area, and therefore all Indian residents are IHS-eligible and potential users, whether they rely on the IHS system or not. Areas that are dependent on IHS contract care also ranked relatively low in per capita funding. It is apparent, however, that the accuracy of the service population figures is the critical factor in equitable per capita resource allocations.

Because the largest portion of the IHS budget is dedicated to clinical services delivered by direct care hospitals and clinics, resource allocations by area follow closely the distribution of IHS and tribally operated health facilities. Figure 1-7 in chapter 1, the map locating IHS and tribal hospitals and clinics, illustrates that facilities are not equally available and accessible to Indians in all IHS areas. Descriptions of the location and range of services offered by IHS direct care, contract care, and urban Indian health programs in chapter 5 also support the conclusion that the present distribution does not offer equal access to comparable types of services. The California and Portland IHS areas have no IHS hospitals at all, and only two of the widely scattered tribes in the

**Table 6-4. -IHS Budget Allocations by Area With Estimated Per Capita Allocations, Fiscal Year 1985**

IHS area	Fiscal year 1985 allocation	1985 IHS service population		1985 IHS user population	
		Population estimate <sup>a</sup>	Per capita allocation	Population estimate <sup>b</sup>	Per capita allocation
Aberdeen . . . . .	\$ 74,270,100	72,679	\$1,021.89	72,679 <sup>a</sup>	\$1,021.89
Alaska . . . . .	119,792,600	73,351	1,633.14	73,351 <sup>a</sup>	1,633.14
Albuquerque . . . . .	53,365,300	52,471	1,017.04	51,363 <sup>f</sup>	1,038.98
Bemidji . . . . .	39,332,100	48,245	815.26	44,337 <sup>c</sup>	887.12
Billings . . . . .	51,495,000	41,326	1,246.07	38,470 <sup>c,d</sup>	1,338.58
California . . . . .	31,243,300	73,414	425.58	26,640 <sup>e</sup>	1,172.80
Nashville . . . . .	32,421,600	36,413	890.39	28,696 <sup>f</sup>	1,129.83
Navajo . . . . .	106,834,600	166,493	641.68	166,493 <sup>g</sup>	641.68
Oklahoma . . . . .	98,540,400	195,346	504.44	178,456 <sup>c</sup>	552.18
Phoenix . . . . .	88,369,600	84,516	1,045.60	79,502 <sup>c</sup>	1,111.54
Portland . . . . .	49,198,500	98,996	496.97	62,380 <sup>f</sup>	788.69
Tucson . . . . .	17,796,000	18,332	970.76	1 5,959 <sup>g</sup>	1,115.11
IHS area totals . . . . .	\$762,659,100 <sup>h</sup>	961,582	\$ 793.13	838,326	\$ 909.74

<sup>a</sup>IHS census-based eligible service population estimates, 1985. When estimated user population counts from other sources exceeded census-based estimates, IHS

<sup>b</sup>Office of Program Statistics elected to use the census-based estimates (fourth column).

<sup>c</sup>Fiscal year 1985 population estimates developed by IHS Office of Program Statistics, recommended for use in fiscal Year 1986 allocation.

<sup>d</sup>Estimate modified by special computer routine to remove duplicates from ambulatory Patient care records.

<sup>e</sup>Based on contract workload data

<sup>f</sup>Based on special count of users from individual California tribal projects.

<sup>g</sup>Based on IHS area office user count data.

<sup>h</sup>Includes enrollment in Pascua-Yaqui health maintenance organization.

<sup>i</sup>This sum of IHS area allocations for fiscal year 1985 (final as of 9/26/85) excludes funding for IHS headquarters functions in Rockville, MD, and Albuquerque, NM.

SOURCE: U S Congress, Office of Technology Assessment, based on data from U S Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Program Statistics, Resources Management and Program Statistics Branches, 1985

Nashville area have access to IHS or tribal hospitals. In these areas, IHS-eligible Indians must rely primarily on their contract care programs for inpatient services, but limited contract care budgets often force rationing of contract referrals to emergency and life-threatening conditions only. In contrast, areas that have IHS hospitals and clinics also have contract care budgets to supplement their direct services. The present approach to resource allocation does not provide a comparable package of services in all areas, nor does it compensate IHS areas that are dependent on contract care for their lack of IHS direct services (although a combined allocation was recommended by the Director's Contract Health Services Task Force in 1983, as discussed below).

A comparison of IHS staff assignments relative to inpatient and ambulatory care workloads among the 12 areas also was described in chapter 5 (see table 5-5). While the average throughout IHS in fiscal year 1984 was 178 clinical workload units per clinical staff position, that measure ranged from a low of 152 workload units per position in the Albuquerque IHS area to a high of 243 units per position in Aberdeen. Such disparities in the workloads carried by IHS staff in different areas support complaints from some areas (Aberdeen, for example) that staffing shortages not only limit the range and volume of services that can be delivered, but unusually heavy workloads also discourage the recruitment of additional staff.

Perhaps the most detailed and systematic documentation of the uneven distribution of IHS resources is generated by the IHS's equity fund allocation formula. As will be described later in this section, IHS allocates an annual equity or special fund by a method that incorporates RRM criteria to determine resource requirements, available resources, and unmet resource needs at the service unit and tribal levels. This formula allows tribes to be ranked by resource deficiency levels in five groups, from level I (0 to 20 percent deficiency) to level V (80 to 100 percent deficiency). Following distribution of the 1985 special fund, 46 of 266 tribes ranked in level I, 99 in level II, 101 in level III, and 20 in level IV. There were no tribes in level V, the group with 80 to 100 percent resource deficiencies. This means that by IHS's own assess-

ment, 121 tribes, or 45 percent of all tribes, were at least 40 percent deficient in their estimated resource needs. The equity formula thus provides evidence of differences in resource availability among IHS areas, and among service units and tribes within IHS areas, which is another aspect of the debate about equity in resource allocation.

Decentralization has been an explicit management philosophy in IHS for many years. Within budget categories and other constraints placed on the funds by Congress, IHS allocates its annual appropriations only to the IHS area office level and permits the areas to redistribute funds among their service units by their own methods. There have been complaints about the rationale for area-to-service-unit allocations, coming most often from smaller and recently reinstated tribes that believe they are not able to compete effectively for resources against larger, well-established tribes.

Individual service units and tribes generally do not relate directly to IHS headquarters in the budget allocation process, but some tribes maintain direct political relationships with Congress and individual members of Congress. In terms of health care, tribal political efforts most often have focused on securing earmarked funding for special initiatives and demonstration projects (e. g., hepatitis-B vaccinations in Alaska or diabetes treatment programs) and for health facilities construction and renovation projects. Facilities projects are selected and funded by Congress under procedures separate from those applicable to IHS health service resource allocations. Nonetheless, new facilities and the expanded staff and operating budgets associated with them are major factors in the overall resource allocation picture.

The limitations of reliable IHS program planning and management information pose problems in many aspects of IHS operations, including resource allocations. Sophisticated allocation formulas cannot be applied without adequate data, nor can the actual extent and impact of resource inequities be convincingly defined. Data are available, however, that could improve resource allocation decisions, given the political consensus to use them. Serious efforts have been underway to improve IHS resource allocation methods since

1980, and especially since summer 1985. These efforts, which are described below, have culminated in a new allocation formula that is proposed for application to a portion of the fiscal year 1986 appropriation. Following a brief description of the development of the RRM criteria and their role since 1981 in distributing the court-ordered annual equity funds, this section will review recent activities in IHS resource allocation and consider factors that might usefully be incorporated in any allocation formula.

### **IHS Resource Management in the 1970s**

Overall appropriations in the 1970s reflected steady growth, and IHS headquarters allocated those funds by budget category to the area offices in keeping with the historical or program continuity budget approach. Each area office could expect to receive its recurring base budget from the previous year, plus an increase in built-in mandatory cost categories (e.g., staff cost of living, relocation expenses, and supply cost increases) equal to the percentage increase in those categories awarded to the overall IHS program.

A process of rationalizing IHS resource management methods was initiated in 1972 with organization of the resource allocation criteria (RAC) workgroup. RAC development was undertaken in an environment of general interest in health planning methods, with encouragement from the Office of Management and Budget and the Office of the Secretary, U.S. Department of Health, Education, and Welfare. RAC standards were not intended to guide the distribution of available resources among competing IHS areas and service programs, but were developed as part of a planning algorithm to quantify the resources required (primarily staffing) to provide a specific volume and mix of services. Modified versions of the original RAC criteria (now known as RRM) still are used in the annual IHS budget development process, in the distribution of equity funds, and in planning the staffing requirements for new facilities and services.

The RAC committee worked from 1972 to 1975 to develop sets of service-specific criteria that defined workload measurements and associated

staffing requirements. The RAC committee was made up of IHS headquarters and area office staff, representatives of the IHS Office of Research and Development, and consultants such as health providers and industrial engineers. The analytical steps followed by the committee and its technical working groups included: 1) definition of IHS clinical service functional areas; 2) review of published criteria and standards; 3) determination of appropriate tasks within each IHS service function; 4) determination of unit times by function; 5) definition of a productive person-year, by type of staff; 6) construction of staffing tables; and 7) submission of proposed or revised criteria to expert panels and the RAC committee for final approval (218).

The original RAC criteria sets defined functions and tasks for inpatient services such as medical care, nursing, laboratory, X-ray, and facility maintenance, to name 5 of the 14 inpatient care components; and for ambulatory medical care, dental care, optometry, audiology, and support services (169). In developing its criteria and standards, the RAC committee drew on the literature, academia, and professional associations for existing manpower criteria, and on industrial engineering techniques including time-and-motion studies. Field work specific to the IHS system was done only for ambulatory care services. Estimates of the times and frequencies of performing defined tasks, by type of service and provider, were incorporated into mathematical models to generate staffing tables that displayed numbers of staff required for each workload level (218).

RAC criteria sets, most of which were detailed to the level of available and required annual service minutes, by type of service and provider, deliberately reflected the staffing levels needed to provide health services under ideal circumstances. Although this was a logical planning approach, the decision to base RAC on ideal service delivery conditions has resulted in a large gap between required resources, as estimated by RAC criteria, and the resources actually available to IHS. Thus, it has produced the awkward deficiency level approach to assessing relative health resource needs among the service units.

Some RAC criteria sets have been updated for changes in technology and delivery patterns, but

they are not all updated on a routine basis. In the 1983 edition of the RAC reference manual, most of the inpatient care criteria dated from 1977 to 1979, while ambulatory services reflected 1980 to 1983 revisions (169). A quick review of all resource allocation criteria sets was completed in summer 1984 by an in-house group known as the “interim fix” committee. That committee reduced staffing requirements overall by 17 percent, incorporated support costs, and changed the measure of resource requirements from staff positions to dollars (214). Another review of the criteria sets in fall 1985 established limits to the range of variation in the workload factors (214).

Late in the 1970s, RAC became known as the resource requirement methodology, or RRM. As then described, the purpose of the RAC/RRM system was “to provide the Indian Health Service with a comprehensive, systematic, and consistent process for determining resource requirements, primarily manpower, as well as a process for distributing non earmarked program increases (positions and funds) to the Area/Program Offices” (169).

In the annual IHS budget application process, service unit and area office staff follow detailed instructions in the RAC/RRM manual to project service unit workload and resource requirements for each functional program. In a process known as demand forecasting, the previous year’s workload (utilization) figures and IHS census-based population estimates are applied to determine the numbers of staff, by type, that would be needed to deliver the expected volume of each type of service. Numbers of required staff then are converted to personnel costs using an average cost per position from IHS headquarters, support costs associated with each service are calculated, and these combined costs represent total resource requirements for each service unit. For a new facility or service that has no workload history, utilization experience from similar IHS facilities is applied to the estimated new service population. Results of the RRM application process by service unit are aggregated to the area office level and then incorporated by IHS headquarters into the overall IHS budget proposal. Therefore, the RAC/RRM criteria do play a role in developing the annual IHS budget request, but neither DHHS nor

Congress is obligated to provide the level of resources needed according to the RRM application.

## The IHS Equity Health Care Fund

IHS’s methods of allocating resources among its area offices, service units, and tribes were the target of legal challenges in the late 1970s. One case, *Rincon Band of Mission Indians v. Califano (104)*, resulted in a court order directing IHS to take steps to reduce the disparities in funding among tribes. The Rincon case was a class action suit filed in May 1974 by certain groups of California Indians who claimed that IHS had illegally denied them health care services comparable to those provided to other American Indians. The plaintiffs documented that from 1968 through 1978, IHS had allocated only 2 percent of its annual appropriations to California Indians who, according to the 1970 census, represented over 10 percent of the IHS service population (132). (See ch. 2 of this assessment for a more detailed discussion of Rincon and related decisions.)

Both the U.S. District Court for the Northern District of California and the U.S. Court of Appeals for the ninth circuit ruled for the plaintiffs. The Court of Appeals criticized the long-standing IHS practice of basing annual resource allocations on the previous year’s budget. The courts found that IHS had not established that its funding decisions affecting California Indians were made on a rational basis, and ruled that IHS was “obligated to adopt a program for providing health services to Indians in California which is comparable to those offered Indians elsewhere in the United States” (132). Neither court specified how IHS was to implement this directive, but both cited *Morton v. Ruiz (89)*, a case involving BIA, as precedent for invalidating IHS’s program continuity funding approach. The Ruiz decision, in brief, stated that if an agency did not have adequate resources to serve all eligible beneficiaries, the agency was obligated to allocate those limited resources equitably by the consistent application of reasonable distributive standards.

In response to the court order, IHS proposed to allocate an equity fund by a needs-based formula as its means of achieving comparability among tribes in health care funding. For fiscal year

1981, the House and Senate Appropriations Committees earmarked \$7,856,000 of the \$594 million IHS health services appropriation, or 1.3 percent, as an equity health care fund (note that \$594 million was the initial appropriation, prior to a supplementary appropriation for personnel cost increases that brought the final fiscal year 1981 appropriation to \$613 million). Questions about the application and effects of the IHS equity fund mechanism were raised soon after its initiation when GAO analyzed the fiscal year 1981 equity distribution. Fifty-one tribes that ranked in level V (80 to 100 percent resource deficiency) in February 1980 received 1981 equity funds, and only two tribes remained in level V in November 1981. GAO concluded, however, that because of weaknesses in the allocation methodology, the tribes that received 1981 equity funds may not have been those with the greatest relative health services needs (132).

Although equity funds totaling \$32,362,000 were earmarked for fiscal years 1981 through 1984, their shares of the overall IHS budgets were less than 2 percent per year, as illustrated in table 6-5 (135). The effects of equity funds on service unit budgets are cumulative, however, because equity awards become part of the recurring base budget and thus are assured in future years. The California Indians received \$11,134,000 (34.4 percent) of the 4-year equity funds. Congress did not earmark equity funds in fiscal year 1985, but IHS, still under court order to reduce funding disparities, set aside a special fund of \$5 million for an equity distribution (78).

The equity fund allocation methodology attempts to determine unmet resource needs by tribe (not by service unit, although the method applies equally well to service units), on a systematic, uniform basis. The methodology: 1) estimates resource requirements for all "tribal and non-tribal entities" (except urban Indian groups) using IHS population estimates, utilization experience, and RRM criteria sets; 2) determines the health resources available to each tribe, including IHS and other Federal, State, local, and private resources; 3) divides unmet need (the difference between resource requirements and available resources, expressed in dollars) for each tribe by its estimated resource requirement to define a percentage deficiency; and 4) ranks all tribes in five levels of resource deficiency, from level I (zero to 20 percent deficiency) to level V (80 to 100 percent deficiency). Available equity funds then are awarded to tribes with the greatest levels of deficiency (17). A newly recognized tribe could be 100 percent resource deficient, if it had not previously received IHS funds; and in fact the equity fund has been an important source of initial funding for newly recognized tribes.

The resources available to a tribe are defined as its recurring base budget from the previous year (including previous year equity funds), plus other available non-IHS health resources. IHS officials believe that data on Medicare and Medicaid resources are reasonably reliable, but other sources including State, local, and private providers and insurers are not well-reported (17,214). Tribes are asked to self-report these other resources, but

**Table 6-5.—IHS Equity Health Care Fund Appropriations, Fiscal Years 1981-84, and IHS Special Fund, Fiscal Year 1985<sup>a</sup>**

	Fiscal year				
	1981	1982	1983	1984	1985a
Appropriation . . . . .	\$7,856,000	\$7,636,000	\$7,000,000	\$9,870,000	\$5,000,000
Percent of total IHS appropriations . . . . .	1.13%	1.13%	0.9%	1.19%	0.60%

<sup>a</sup>Congress did not appropriate an equity fund in fiscal year 1985. Instead, IHS set aside a \$5 million special fund from its hospitals and clinics budget that was distributed by the equity formula.

SOURCES: For fiscal years 1981-84: Data from the Indian Health Service published in U.S. Congress, House of Representatives, Committee on Energy and Commerce, staff report for the Subcommittee on Health and the Environment, "Indian Health Care: an Overview of the Federal Government's Role," committee print 98-Y, U.S. Government Printing Office, Washington, DC, April 1984. For fiscal year 1985: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, 1985.



clearly it is not advantageous for them to do so and thus reduce their estimated unmet resource needs.

After distribution of the 1985 special equity fund, 46 of 266 tribes had resource deficiencies of 20 percent or less (level I); 99 were in level II; 101 in level III; and 20 tribes ranked in level IV with resource deficiencies exceeding 60 but less than 80 percent (see table 6-6). There were no tribes with resource deficiencies exceeding 80 percent (level V) (189). It is interesting to note that according to IHS's equity methodology, the Rosebud Sioux service unit in South Dakota, which frequently is cited as an example of poor quality Indian health care, now ranks among the 46 best-served tribes with a resource deficiency of less than 20 percent. Peculiarities such as this raise questions about the validity of the equity formula and its supporting data. Nonetheless, the special equity fund was the only portion of the fiscal year 1985 IHS allocation that was distributed on a basis other than program continuity.

### Resource Allocation in the 1980s

From October 1982 through publication of its report in February 1983, a special interagency IHS Director's Task Force on Contract Health Services analyzed a number of problems affecting IHS operations. Among its recommendations, the task force suggested that improvements be made in IHS resource allocation methods (181).

The task force concurred with judicial directives that IHS should develop and apply rational, equitable methods of allocating its appropriated re-

sources. Furthermore, it concluded that a formula should be developed to combine direct and contract care resource needs, and it should be based on enrolled user populations rather than IHS eligible service population estimates (181). The task force observed that IHS's long-standing practice of allocating funds on the basis of program continuity, combined with the earmarking of funds in congressional appropriations, had contributed to substantial inequities in the funding of health services among IHS service areas and tribes.

The contract health services task force urged that a new set of allocation formulas be developed to take into account a defined service population, reasonable estimates of third-party resources, the unique geographic, economic, and health status characteristics of the areas, and incentives for good management. A model resource allocation formula was proposed that defined an area's annual need for clinical services funding by its actual user population, multiplied by user per capita costs of hospital and ambulatory care services, respectively, minus estimated third-party reimbursements. Individual IHS area dollar requirements then would be divided by the combined requirements of all areas and the resulting percentage multiplied by the congressional appropriation for IHS clinical services. The task force recommended that IHS areas use this same approach to determine service unit allocations (181).

Although these specific recommendations of the contract health services task force were not adopted, they provided the starting point for work during the summer of 1983 by another in-

**Table 6-6.—IHS Ranking of Tribal Groups by Deficiency Level for Equity Health Care Fund Distribution, 1980-85**

Percent deficiency	Deficiency level	Number of tribes			
		As of February 1980	As of November 1981	As of April 1984	As of March 1985
<20 . . . . .	I	1	10	36	46
21 to 40 . . . . .	II	15	30	60	99
41 to 60 . . . . .	III	88	95	156	101
61 to 80 . . . . .	IV	93	107	0	20
81 to 100 . . . . .	V	51	2	0	0
IHS total . . . . .		248 <sup>a</sup>	244 <sup>a</sup>	252 <sup>a</sup>	266 <sup>a</sup>

<sup>a</sup>Totals vary from year to year because of newly recognized tribes and changing tribal health consortiums

SOURCES U. S. Congress, General Accounting Office, "Indian Health Service Not Yet Distributing Funds Equitably Among Tribes," publication GAO/H RD-82-54 (Washington, DC U.S. Government Printing Office, July 2, 1982); and tribal rankings for 1984 and 1985 from U. S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Program Planning Branch, 1985

house group, the Resource Allocation Methodology (RAM) Task Force (182). The objective of the RAM approach was “to promote cost-effectiveness and quality of existing IHS services and to promote equal access to equivalent health care to all eligible Indians” (182). The RAM task force defined equity as “relative equal access of the service population to equivalent health care services,” and recognized both the need for continuity in serving current user populations and the need to address limited access to IHS services in some areas. A two-part approach to allocating IHS resources was proposed: resources to maintain existing services (the bulk of the funding) would continue to be allocated primarily on a historical funding basis; but a portion of the resources would be distributed to selected areas to compensate for their lack of access.

To determine appropriate resource compensation for underserved areas, utilization rates for inpatient and ambulatory care (combining IHS direct services and contract care programs) would be calculated for each area and compared with utilization rates for IHS as a whole (rates based on summed area figures). If an area’s utilization rates were lower than the IHS average, the difference would figure into a formula to generate additional resource requirements. The RAM task force did not fully develop this part of its approach because of data limitations, but it assumed that below-average utilization reflected a lack of access to services and was a proxy for unmet need (182). Some of the task force’s proposals were pilot tested by IHS headquarters staff from November 1983 through January 1984 with verified area workload and cost data. IHS concluded that the approach that incorporated RRM criteria to determine existing service requirements, which was similar to the equity distribution formula, was sound.

In fiscal year 1984, IHS received program increases of nearly \$42 million in budget categories for hospitals and clinics, contract health services, and support to tribally operated services. Allocation of the hospitals and clinics program increase of \$9.5 million reflected a measure of unmet need based on RRM, but it was the only one of the three special allocations that incorporated RRM. Of the \$27.4 million increase for contract

care, \$9.4 million was withheld and allocated administratively to cover priority I emergency care. The remaining \$18 million was allocated among IHS areas by a method that incorporated actual rates of cost inflation experienced in each area. There were substantial variations in those rates, as area offices appear to have little control over increases in charges by non-IHS contract care providers. A total of \$5 million in additional funding was available in 1984 to support tribally operated 638 health programs. It was allocated by an inflation-based model, in which the same Office of Management and Budget inflation rate was applied to all IHS areas, with the result that all areas received the same percentage increase (7.6 percent) over fiscal year 1983 funding (222).

Combining the allocations of fiscal year 1984 increases in hospitals and clinics, contract care, and tribal support, the Aberdeen IHS area received the largest percentage increase (about 26 percent above its 1983 recurring base budget), although its overall budget was relatively small. Tucson received a 15-percent increase on a small budget, and the Bemidji, Navajo, and Portland IHS areas received increases of about 10 percent each. California received the smallest increase, 6.7 percent.

This discussion of recent modifications in IHS resource allocation methods illustrates that when additional funds have been available, as they were in fiscal year 1984, efforts have been made to distribute at least part of the increases to achieve a more equitable balance in funding and service availability among the areas. It is not surprising, however, that there remains a great reluctance to redistribute area recurring base budgets. There were virtually no additional moneys in fiscal year 1985, and the methods tested in 1984 were not used again. The fiscal year 1985 distribution followed the program continuity allocation process of supporting recurring base budgets, with a special fund of \$5 million withheld for an equity formula distribution. In addition, a small reserve of about \$2 million was distributed from headquarters to meet emergencies during the year (214).

Allocation of the fiscal year 1986 IHS appropriation had not been completed by the end of February 1986, due to uncertainties about final 1986 funding levels and proposed modifications to the

resource allocation process. IHS was appropriated \$818 million for health services and nearly \$47 million for facilities construction under the fiscal year 1986 continuing resolution (91). The Gramm-Rudman legislation (Public Law 99-177), effective March 1, 1986, reduced IHS appropriations by 1 percent in service delivery categories and 4.3 percent in administrative functions, resulting in losses of \$10.4 million to health services and \$0.4 million to facilities construction budgets. Still pending in March 1986 were recisions proposed by the Office of Management and Budget amounting to an additional \$32 million cut in IHS services and \$44 million in facilities construction (91). Because Congress would have to adopt the Office of Management and Budget recisions in order for them to take effect, it is thought that they will fail; but the issue remained unresolved in March 1986.

Since fall 1985, an IHS workgroup known as the Operations Analysis Project has been considering possible modifications to the IHS resource allocation process. The work of this group resulted in a detailed draft proposal to the IHS Director early in 1986. RRM criteria sets (modified by screens, or limits in the range of acceptable workload values) will be applied at the service unit level and aggregated to area offices, allowing the areas to be ranked by levels of deficiency and additional funds to be distributed to compensate the most deficient areas (214). The basic approach would be similar to the equity fund formula: use of RRM criteria sets, actual utilization data, and enrolled (not census-based) population figures to identify area resource requirements; quantification of IHS and non-IHS available resources; estimation of a health status indicator, years of productive life lost, based on mortality rates, by area; and comparison of resource requirements against available resources, adjusting for health status and resource deficiencies, to generate a final allocation formula by IHS area.

The IHS Director must determine what amount of funding will be subject to the new allocation formula, what amount of non-IHS resources (collections from Medicare, Medicaid, and other third-party resources) should be offset against total resource needs, and how two new weighting factors—the area percentage of the IHS weighted

resource deficiency, and the area percentage of IHS total years of productive life lost—should figure in the formula (214). The IHS Director consulted on these questions with the area directors in meetings held in late fall 1985 and March 1986. The IHS area directors have agreed that any funding increases over fiscal year 1985 base budget levels (including mandatory budget categories) will be distributed by a special RRM-based, equity type formula; but no area will receive less than its 1985 funding (the areas simply will receive varying amounts of the additional funds). Furthermore, area population figures will be based on the patient registration system, rather than on IHS census-based estimates of the eligible service populations. The resource allocation formula that ultimately will be applied, however, will be decided when the final level of fiscal year 1986 funding is known.

## Conclusions

IHS traditionally has distributed its annual appropriations among its areas by budget category, according to each area's share of the budget from the previous year. Thus, there has been incremental funding growth to support existing programs and facilities. The RAC/RRM system, developed in the 1970s to rationalize planning for staffing needs, has been used since 1981 in the court-ordered distribution of IHS equity funds. The RRM criteria, however, do not play a major role in the overall IHS budget allocation process, which continues to be driven by the historical or program continuity funding approach. Even if RRM criteria were incorporated in IHS allocation methods, distributions based on RRM criteria, workloads, and population estimates would not factor in relative health status, health needs, special geographic problems, availability of alternate resources, or other measures that could provide for more rational and cost-effective decisionmaking. When health care needs do not result in service utilization, as may be the case in areas where IHS and other services are not readily available and accessible, those needs usually are not taken into account at all.

Although the equity fund distribution appears to follow a straightforward approach incorporat-

ing the RRM criteria, the formula is vulnerable to problems of data quality and validity, completeness of reporting, and the apportionment of population estimates. The need to make assumptions about data sources and processes in order to apply the methodology can result in unpredictable and unintended outcomes. IHS has responded to criticisms such as these with efforts to improve supporting data systems and to increase consistency in application of the equity formula. After 5 years of equity fund distribution, some tribes (especially newly recognized tribes) have benefited; but because the equity formula has been applied to less than 2 percent of the overall IHS budget each year, the approach has not produced significant changes in area budget shares. A resolution by the Navajo nation (120) and comments from the Northwest Portland Indian Health Board (95) and other groups indicate that the IHS equity approach so far has been an unsatisfactory means of attempting to equalize resources and services among tribes.

Recent IHS efforts to refine a resource allocation formula, like the equity formula, that could be applied to redistribute a portion of IHS area recurring base budgets (as well as to budget increases or reductions) are encouraging. Given the practical and political arguments against a sudden, substantial redistribution of IHS resources, greater equity in overall resource distributions could be achieved gradually by the allocation of designated funds by a needs-based formula. Congress has earmarked IHS funds for equity distribution in the past and could continue to do so, pacing the redistribution by the amount of earmarked funds. Likewise, appropriations could be earmarked for development of the needed IHS patient care and program management information system. Congress has expressed support for the concept of comparable service packages in all IHS

areas, an approach that is supported by a number of tribal organizations as well.

There are reasons to expect that equity and cost-effectiveness in IHS resource allocation will continue to be important issues for the program, and in fact may become more critical in the near future. In the past, IHS was able to allocate budget increases from year to year; but in the future, it may be required to manage stable or reduced overall appropriations (how the proposed 1986 resource allocation formula might be applied to budget reductions, instead of increases, is under study in IHS). Although Gramm-Rudman reductions in the fiscal year 1986 IHS budget were limited to 4.3 percent of administrative and 1 percent of service costs, future applications of that law would have serious cumulative effects.

In many IHS areas, limited funding already forces rationing of services in the IHS contract care program, and overall budget constraints will increase pressures to ration those services. At the same time, if adequate funding is not available to maintain IHS facilities and equipment, those facilities will deteriorate and the capacity to deliver services directly could decline and force greater reliance on contract care purchases. IHS already experiences shortages of qualified medical staff, and when the National Health Service Corps is phased out (the last assignees will be available in 1990), those shortages could become critical. Finally, IHS is planning to publish new rules governing eligibility for IHS services, which could result in a realignment of IHS area service populations. All of these factors will focus greater attention on the cost-effectiveness of IHS resource allocation decisionmaking, especially if IHS is in a position to distribute budget losses rather than gains, and will intensify the debate about the data, allocation criteria, and formulas that should be used.

## THE PROBLEM OF HIGH-COST CASES IN THE IHS CONTRACT CARE PROGRAM

### Introduction

The IHS contract care program and its management at the service unit and area office levels were discussed in chapter 5. Given the difficul-

ties some service units experience in purchasing only the most urgently needed services with their limited contract funds, it is not surprising that one or more extremely costly cases could absorb a

large part of a service unit's contract care budget. Not only is it difficult for service units to cover the costs of these so-called "catastrophic cases," but because most of the high-cost cases involve life-threatening conditions that take precedence over less urgent care, the entire contract care delivery system may be disrupted. In areas that do not have IHS direct care hospitals to fall back on for basic inpatient services, the budget effects of high-cost cases can result in the deferral or denial of substantial amounts of contract care.

The problem of catastrophic costs in the IHS contract care program should not be confused with the subjects of catastrophic illness and catastrophic health insurance as they generally are understood in the field of health research. Catastrophic costs usually refer to the devastating financial effects that extremely costly and long-term illnesses can have on individuals who may have no insurance or who may be inadequately insured. In the IHS contract care program, the costs of catastrophic illnesses not covered by other payers are borne by IHS, not by individual Indians (although there may be cases that are disputed between IHS and another payer as to which is the responsible party, leaving the individual Indian caught between the two). Catastrophic costs most often are defined in terms of out-of-pocket costs to individuals exceeding a certain percentage of individual or family income, or as total costs per case in the range of **\$20,000 to \$25,000 and up**. In IHS, on the other hand, the discussion of catastrophic costs has revolved around the idea of setting a threshold for individual service unit obligations somewhere between \$10,000 and \$20,000 per case.

The negative effects of high-cost cases on contract care program management have been felt for several years, and some IHS areas have taken steps to assist their service units in dealing with the problem. The most frequently used mechanism is an areawide contingency fund that is withheld from the area's annual contract care allocation and made available to service units for cases whose costs exceed a predetermined threshold. This approach currently is applied in the Alaska and Portland IHS areas. Other areas have expressed interest in setting an upper limit on their obligation to pay for individual high-cost cases

(a cap was imposed in the Oklahoma City IHS area until recently), but this approach has been determined to be illegal by the IHS general counsel (60).

Congress addressed the problem of high-cost cases in the Indian Health Care Amendments of 1984 (vetoed by President Reagan). A provision earmarking the sum of \$12 million for a catastrophic health emergency fund was reintroduced in 1985 versions of the amendments. The fund would be used to meet "the extraordinary medical costs associated with the treatment of victims of disasters or catastrophic illness falling within the responsibility of the Service" (133).

The proposed catastrophic fund would not be apportioned among the IHS areas and service units, but would be administered by IHS headquarters. The legislation provided that catastrophic conditions would be defined solely in terms of cost, not cause, by a threshold to be established between \$10,000 and \$20,000 per case, and all IHS costs above the threshold would be applicable to the catastrophic fund. The fund was seen primarily as a means of providing temporary budget relief to area and service unit contract care programs and to the contract care programs operated by tribes under the Self-Determination Act (60).

Although the catastrophic fund was not cited as a reason for the President's veto of the 1984 Indian Health Care Amendments, Administration officials in testimony on the 1985 amendments stated their opposition to it. The Administration position was that separate authorization was not necessary, because IHS already can shift resources within its system to cover the costs of unusually expensive contract care cases (136).

During congressional review of the 1984 Indian Health Care Amendments, it was found that neither the number of high-cost cases in the IHS service population, nor the costs, nor the causes of those cases could be documented. In response to questions from Congress, IHS estimated that there were about 400 cases in fiscal year 1983 for which costs of at least \$25,000 per case were incurred by the IHS contract care program. The total cost of those 400 cases to IHS was estimated at \$15 million. The amount of high-cost care for eligi-

ble Indians that was funded at least in part by third-party payers, including Medicare, Medicaid, and private insurance, could not be determined. IHS suggested that trauma (especially from automobile accidents) accounted for a large number of the cases, and that end-stage renal disease and neonatal intensive care represented catastrophic costs when patients did not have third-party coverage (172). Because of this lack of information to describe the IHS high-cost care problem, OTA was specifically requested to address the matter.

Data on high-cost cases that have been obtained from the IHS contract care program are incomplete and poorly identified. Data items are not always uniform in records from different areas, and descriptive diagnoses have been reported by persons unskilled in extracting information from medical records. It is not known if all cases meeting the selection criteria (an IHS obligation of \$10,000 or more per case) were reported to headquarters. Costs per case are incomplete because most area offices were able to provide hospital costs only. Thus, it is not possible to determine from available data whether what is called a problem of catastrophic care is in fact a problem of excessive incidence of catastrophic conditions in the Indian population, or whether it is more properly described as a budget management problem. Lacking documentation of unusually high incidence rates, and because IHS itself defines catastrophic cases strictly in terms of costs, it seems most useful for the present analysis to address the situation as a budget management problem within the IHS contract care program.

## Data on IHS High-Cost Cases

### Special IHS Data Collection Activities

In the fall of 1984, possibly in anticipation of passage of the Indian Health Care Amendments and the consequent charge to IHS to implement the catastrophic health emergency fund, staff of the IHS headquarters contract care program began an informal data collection effort to identify high-cost cases. This effort followed the steps outlined below (86):

1. IHS headquarters searched the automated contract care billing files, known as the

“piggyback” data system, for all bills in which the IHS obligation for hospital charges was \$10,000 or more (associated physician fees, laboratory, pharmacy, operating room, and other charges were not included if billed separately from hospital charges). This initial search was performed during late October and early November 1984 on the file of processed fiscal year 1984 contract care bills. Inpatient stays for high-cost cases often exceed 45 days; thus it is likely that an unknown number of 1984 cases was missed because bills had not yet been filed and processed.

2. Headquarters listed the bills by area, sent the lists to the IHS area offices, and requested that contract care authorization forms (Health Services Administration forms 43 for inpatient care or 64 for other than inpatient or dental care) be pulled for each of the bills, photocopied, and returned to headquarters. No attempt was made at headquarters, the area offices, or service units to aggregate all bills associated with the same patient and episode of care (except, it has been reported, in the Phoenix and Alaska areas). This is another factor that may contribute to an undercounting of cases costing the IHS \$10,000 or more.
3. The IHS areas filled the headquarters request as best they could given their different manual and automated contract care record systems. As a result, there is variability in the data items that each area could provide. The service units were involved in pulling the contract care authorization forms for each listed bill.
4. When the contract care authorization forms were received at headquarters, they were checked against the lists of requested forms and edited informally; but there is no record of what followup activities, if any, were carried out. Bills were excluded if they represented payment for a block of services to a group of patients (a standing, negotiated service contract); for example, laboratory services for all service unit contract care patients for the year.
5. Individual high-cost case billing records then were entered into a personal computer system with a LOTUS program. The data items

usually included IHS area; service unit; in some cases, the name of the private provider; a document identification number, if available; one selected noncoded, nonstandardized description of the diagnosis or cause of the hospitalization; a description of one selected procedure; the amount paid by IHS on the hospital bill; the amount paid by an alternate payer, if available; and a total of IHS and alternate payer expenditures. Inpatient days per case were added in subsequent requests for fiscal year 1982 and 1983 records.

6. The preliminary data set for fiscal year 1984 consisted of 331 cases. IHS decided that in order to support further analyses, additional records were required. Following the same procedures outlined above, headquarters requested contract care authorization forms for high-cost cases in fiscal years 1982 and 1983. These records were received and entered in the personal computer system beginning in April 1985.

OTA staff performed preliminary analyses on the 331 cases for fiscal year 1984 (the number of cases grew to 390 by the time of the final OTA analysis described later in this section). In response to the interests of congressional committees and OTA's Indian health advisory panel, OTA began to work closely with IHS contract care program staff to design a more complete and formal study of high-cost cases. Negotiations regarding this study went on from April through June 1985, and resulted in a methodology prepared by IHS that would manipulate automated data files to generate information on the numbers, causes, and total costs of the high-cost cases. During the summer, however, it became apparent that although the extensive reprogramming that would be required for the study was feasible, it could not be done by the IHS data center in Albuquerque. The project was referred to the PHS computer center in Rockville for cost estimates. In September, discussions with IHS staff made it clear that the work would not be completed in time for inclusion in the OTA study (45). At that time, OTA again began to explore use of the high-cost case data collected by the IHS contract care program for fiscal years 1982, 1983, and 1984, described above.

It should be understood that the information presented here is rough, but it is the best that was available to describe high-cost cases in the IHS contract care program. Unfortunately, many of Congress' specific questions about total costs per case, the role of third-party payers, accurate and detailed causes of these costly hospitalizations, and patient demographics cannot be answered on the basis of the information at hand. Answers to questions such as these are necessary before methods of financing and insuring IHS high-cost cases can be seriously considered.

#### Analysis of the IHS High-Cost Case Data Set

The data presented here are the product of work with the IHS file of 1,295 high-cost cases from fiscal years 1982, 1983, and 1984 (123). Problems with these data already have been noted: for example, there is no way to verify that all cases are included, and in fact there is evidence that some 1984 cases were missed because the billing file was searched so soon after the close of the fiscal year. A second search of the 1984 contract care billing file in October 1985 generated 746 records of IHS hospitalization disbursements exceeding \$10,000 (122). This more recent run of 746 records could not be closely compared with the 390 cases finally identified for 1984 by the IHS special data collection effort, but it represents a substantial increase over the number of cases included in the present analysis.

The reported costs in these cases are IHS disbursements for hospital care only. They do not represent total costs per case. Fiscal year 1984 data on 37 catastrophic cases from the Portland IHS area, if applicable to all areas, suggest that hospital costs alone make up about 84 percent of total IHS expenditures for high-cost hospitalizations (198). The number of high-cost cases involving IHS-eligible Indians whose bills were paid entirely by a third-party payer cannot be identified by any IHS data system; and if other payers left a residual liability to IHS of less than \$10,000, the case would not have been selected for IHS special data collection.

The relative completeness and accuracy of data reporting from IHS areas are not known, but there are obvious gaps in the data. The California, Be-

midji, and Nashville IHS areas reported very few cases, probably because much of the care in those areas is delivered by the tribes under self-determination (Public Law 93-638) contracts, and data from 638 programs usually are not included in the contract care "piggyback" data system that was used for IHS case selection (58). Those same IHS areas also are particularly active in collecting from third-party payers, which may have reduced the number of cases that cost IHS more than \$10,000. Finally, service units such as some of those in California (e.g., Toiyabe) may rarely if ever authorize inpatient referrals, because of budget limitations, and by not incurring bills of \$10,000 or more would not appear in the IHS special data set. In Oklahoma, high-cost cases are under-reported because the contract care program in recent years attempted to impose a cap of \$3,000 per case, thereby reducing demands on the contract care budget.

The tables that follow present numbers of high-cost cases in the IHS data file for fiscal years 1982, 1983, and 1984, respectively, by IHS area. The cases are described with total costs for the area, average costs per case and, for fiscal years 1982 and 1983, average inpatient days per case and average cost per inpatient day (Alaska did not report inpatient days, and so is excluded from the last two items).

A total of \$7.9 million was spent on hospital care for 381 cases identified in fiscal year 1982 (table 6-7). The average cost per case was \$20,752, and the average inpatient stay was 30 days at \$684 per day. The highest average cost per case was in Alaska, at \$24,272, but the Phoenix area also was high at \$23,934. IHS area office sources in Phoenix report that they attempted to match all contract care bills associated with individual episodes of care, possibly including more than one hospitalization per patient. All cases with cumulative IHS disbursements exceeding \$10,000 per patient per year were reported for Phoenix, which may explain in part the large number of cases from that area and their high average costs (61). No cases at all were reported for 1982 from the Bemidji, Nashville, Oklahoma, California, or Tucson IHS areas. Because of the obvious differences among the areas in their responses to the IHS headquarters data request, comparisons among IHS areas should not be overemphasized.

Fiscal year 1983 (table 6-8) is the most complete annual data set in this analysis. IHS disbursements for high-cost hospitalizations totaled \$10.8 million. There were 524 cases reported from all IHS areas except California and Tucson (although Bemidji, Nashville, and Oklahoma reported few cases). The average cost per case was slightly lower than in 1982, at \$20,549, and was associ-

**Table 6-7.—High-Cost Cases in the IHS Contract Care Program, by Area, Fiscal Year 1982<sup>a</sup>**

Area	Number of cases	Total cost	Average cost/case	Average inpatient days/case	Average cost/inpatient day
Aberdeen . . . . .	46	\$ 831,629	\$18,079	43	\$423
Alaska <sup>b</sup> . . . . .	37	898,048	24,272	—	—
Albuquerque . . . . .	24	401,015	16,709	28	591
Bemidji <sup>c</sup> . . . . .	—	—	—	—	—
Billings . . . . .	50	1,072,103	21,442	29	733
California <sup>c</sup> . . . . .	—	—	—	—	—
Nashville <sup>c</sup> . . . . .	—	—	—	—	—
Navajo . . . . .	74	1,301,984	17,594	26	6 &
Oklahoma <sup>c</sup> . . . . .	—	—	—	—	—
Phoenix . . . . .	114	2,728,461	23,934	27	894
Portland . . . . .	36	673,419	18,706	33	560
Tucson <sup>c</sup> . . . . .	—	—	—	—	—
<b>IHS all areas . . . . .</b>	<b>381</b>	<b>\$7,906,659</b>	<b>\$20,752</b>	<b>30</b>	<b>\$684</b>

<sup>a</sup>Averages have been computed by area. Cases without inpatient days have been excluded from average inpatient day and average cost/day calculations.

<sup>b</sup>Inpatient days not available for Alaska.

<sup>c</sup>data reported from Bemidji, Nashville, Oklahoma, California, and Tucson.

SOURCE: U.S. Congress, Office of Technology Assessment, with data from U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, contract care program special data collection, fall 1984-spring 1985.



**Table 6-8.—High-Cost Cases in the IHS Contract Care Program, by Area, Fiscal Year 1983<sup>a</sup>**

Area	Number of cases	Total cost	Average cost/case	Average inpatient days/case	Average cost/inpatient day
Aberdeen . . . . .	74	\$ 1,291,481	\$17,452	35	\$504
Alaska <sup>b</sup> . . . . .	94	2,859,738	30,423	—	—
Albuquerque. . . . .	34	682,911	20,086	28	722
Bemidji <sup>b</sup> . . . . .	2	22,485	11,243	—	—
Billings . . . . .	89	1,750,740	19,671	26	758
California <sup>c</sup> . . . . .	—	—	—	—	—
Nashville . . . . .	2	58,782	29,391	42	700
Navajo . . . . .	76	1,653,086	21,751	22	987
Oklahoma . . . . .	9	107,271	11,919	18	679
Phoenix . . . . .	93	1,422,039	15,291	17	893
Portland . . . . .	51	918,985	18,019	36	507
Tucson <sup>c</sup> . . . . .	—	—	—	—	—
IHS all areas. . . . .	524	\$10,767,518	\$20,549	21	\$707

<sup>a</sup>Averages have been computed by area. Cases without inpatient days have been excluded from average inpatient day and average cost/day calculations.

<sup>b</sup>Inpatient days not available for Bemidji and Alaska.

<sup>c</sup>NO data reported from California or Tucson.

SOURCE: U.S. Congress, Office of Technology Assessment, with data from U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, contract care program special data collection, fall 1984-spring 1985.

ated with an average stay of 21 days for all areas except Alaska, compared with 30 days in 1982. The average cost per day was \$707 in 1983, up from \$684 in 1982. The range in average costs per case was wider than in 1982: excluding average costs in Bemidji, Nashville, and Oklahoma because of incomplete reporting, the range was from \$15,291 in the Portland area to \$30,423 per case in Alaska.

Inpatient days were not reported by any of the areas in fiscal year 1984, and this is the year in which the greatest amount of case underreporting is suspected. Total hospital disbursements associated with the 390 cases were \$8.5 million, well below the 1983 amount. Again, the small numbers of cases reported from Bemidji (no cases), Nashville, Oklahoma, California, and Tucson distort data for those IHS areas. Table 6-9 shows that in 1984 the average cost per case was nearly \$22,000, ranging from about \$15,000 per case in the underreported areas of Oklahoma, Nashville, and California to a high of \$37,852 per case in Alaska. (Note that 1984 costs for Alaska are somewhat higher than for other areas because total expenditures, including hospital and some physician charges, were reported instead of hospital costs alone. If the average cost per case in Alaska is reduced by the approximately 16 percent nonhospital costs found in Portland, the average cost per case would be about \$32,000 which, when deflated by 25 percent for the higher

**Table 6-9.—High-Cost Cases in the IHS Contract Care Program, by Area, Fiscal Year 1984**

Area	Number of cases	Total cost	Average cost/case <sup>a</sup>
Aberdeen . . . . .	56	\$ 903,835	\$16,140
Alaska <sup>b</sup> . . . . .	69	2,611,785	37,852
Albuquerque. . . . .	13	232,853	17,912
Bemidji <sup>c</sup> . . . . .	—	—	—
Billings . . . . .	85	1,766,292	20,780
California <sup>d</sup> . . . . .	1	15,232	15,232
Nashville <sup>d</sup> . . . . .	4	58,640	14,660
Navajo . . . . .	66	1,169,000	17,712
Oklahoma <sup>d</sup> . . . . .	16	206,257	12,891
Phoenix . . . . .	44	764,571	17,377
Portland . . . . .	29	703,595	24,262
Tucson <sup>d</sup> . . . . .	7	113,494	16,213
IHS all areas . . . . .	390	\$8,545,554	\$21,912

<sup>a</sup>Averages have been computed by area.

<sup>b</sup>For the 69 cases from Alaska, reported costs include hospitalization and physician fees. In other areas, costs are for hospitalization only.

<sup>c</sup>NO data reported from Bemidji.

<sup>d</sup>California, Nashville, Oklahoma, and Tucson reporting may be incomplete.

SOURCE: U.S. Congress, Office of Technology Assessment, with data from U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, contract care program special data collection, fall 1984-spring 1985.

costs of living in Alaska to \$27,000, is closer to the IHS average. )

### Causes of the IHS High-Cost Cases

All IHS high-cost case records for fiscal years 1982, 1983, and 1984 were combined for the distribution of cases by cause presented in table 6-10. Nineteen individual cause categories are subtitled in seven groups: complications of pregnancy, childbirth, and puerperium; infections;

**Table 6-10.—High-Cost Cases in the IHS Contract Care Program, by Cause:  
All Cases, Fiscal Years 1982, 1983, and 1984<sup>a</sup>**

Causes	Fiscal years 1982-84				Fiscal years 1982-83		
	Number of cases	Percent of all cases	Total costs	Average cost/case	Cases with inpatient days	Average inpatient days/case	Average cost/inpatient day
Complications of pregnancy, childbirth, and puerperium . . . . .	228	17.6	\$6,749,106	\$29,601	119	36	\$ 694
1. Prematurity . . . . .	167	12.9	5,489,332	32,870	76	39	696
2. Congenital anomalies . . . . .	25	1.9	539,102	21,564	21	37	621
3. Neonatal complications associated with delivery . . . . .	23	1.8	548,590	23,852	14	27	840
4. Maternal complications . . . . .	13	1.0	172,082	13,237	8	21	662
Infections. . . . .	141	10.9	2,704,798	19,183	82	27	666
5. Respiratory . . . . .	59	4.6	1,214,978	20,593	31	27	767
6. Other . . . . .	82	6.3	1,489,820	18,169	51	27	605
Trauma . . . . .	307	23.7	6,093,984	19,850	182	29	623
7. Motor vehicle . . . . .	54	4.2	991,153	18,355	34	28	703
8. Violence . . . . .	36	2.8	695,830	19,329	21	23	756
9. Other trauma. . . . .	174	13.4	3,322,793	19,097	109	31	587
10. Burns . . . . .	38	2.9	1,009,709	26,571	15	29	594
11. Poisonings. . . . .	5	0.4	74,499	14,900	3	23	569
Malignancies (12). . . . .	64	4.9	1,412,204	22,066	32	29	662
Cardiovascular . . . . .	176	13.6	3,169,621	18,009	106	16	1,087
13. Heart . . . . .	138	10.7	2,517,485	18,243	83	14	1,257
14. Vascular system (emboli, aneurysms; including strokes)	38	2.9	652,136	17,161	23	24	719
Digestive system (except infections, malignancies) (15). . . . .	125	9.7	2,176,447	17,412	75	22	750
Other . . . . .	254	19.6	4,913,571	19,345	164	30	638
16. Diabetes. . . . .	14	1.1	234,618	16,758	11	24	741
17. End-stage renal disease . . . . .	24	1.9	389,854	16,244	19	21	826
18. Alcoholism . . . . .	4	0.3	96,645	24,161	3	32	868
19. All others . . . . .	212	16.4	4,192,454	19,776	131	32	609
All causes . . . . .	1,295	100.0	\$27,219,731	\$21,019	760	28	\$ 695

<sup>a</sup>Averages computed by cause and group of causes.

SOURCE: U. S. Congress, Office of Technology Assessment, with data from U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, contract care Program special data collection, fall 1984-spring 1985.

trauma; malignancies; cardiovascular conditions; digestive system (other than infections and malignancies); and other. As noted above, the inconsistent and incomplete nature of available diagnosis and procedure descriptions made coding by cause difficult. The information is sufficiently important, however, to consider even within these limitations.

The distribution of cases by cause in the IHS data set tends to confirm anecdotal reports about the major causes of high-cost cases. As expected, trauma (23.7 percent of all 1,295 cases) and premature infants (12.9 percent) were among the leading causes. (Trauma descriptions often were insufficient to sort as either motor vehicle accidents or violence, but it is believed that many of the "other trauma" cases are in fact attributable to those specific causes.) Cardiovascular conditions, which included heart attacks and open heart surgery, accounted for 13.6 percent of all cases;

infections also ranked relatively high, at 10.9 percent. Hospitalizations associated primarily with the treatment of malignancies, diabetes, end-stage renal disease, and alcoholism did not stand out as significant causes of high-cost care. In the case of renal patients, great efforts are made at the service unit and IHS area levels to ensure that Indian patients are enrolled in the Medicare program, if eligible, so that IHS will not be liable for this costly care (averaging at least \$25,000 per dialysis patient per year). For Indians who do not qualify for Medicare coverage, Medicaid programs in most States pay for renal dialysis and transplantation.

In addition to the number and percent of all cases in each cause category, table 6-10 presents the total and average costs associated with the cases by cause. These figures include data from all 1,295 cases over 3 years. The total IHS expenditure was \$27.2 million, or close to \$10 million

per year, and the average cost per case over the 3-year period was \$21,000. Average costs per case varied by cause from a low of \$13,000 to \$14,000 per case for poisonings and maternal complications of pregnancy and childbirth, to a high of nearly \$33,000 per case for the care of premature infants. These average costs relate to average lengths of stay by cause. Note, however, that because inpatient days were not reported for 1984 cases, the columns presenting average inpatient days per case and average cost per inpatient day by cause reflect only the 760 cases having that data item from 1982 and 1983 (Alaska excluded). Therefore, average days multiplied by average costs per day will not equal the column based on 3 years' data, average cost per case. The longest average stay by cause was 39 days for premature infants; infants with congenital anomalies also had longer than average stays, 37 days. The average length of stay for all 1982 and 1983 cases was 28 days. Maternal complications, heart conditions, some trauma, digestive system problems, diabetes, and end-stage renal disease were associated with shorter than average lengths of stay. Average costs per inpatient day, by cause, varied around \$695 per day.

Because of differences in databases, it is difficult to compare the distribution of IHS high-cost contract care cases, by cause, with all IHS hospitalizations, by cause, or with other IHS health status indicators. For example, the OTA health status analysis presented in chapter 4 found that 6.1 percent of all Indian live births in all IHS areas (1980-82) were low birth weight infants. For U.S. women of all races (1981), 6.8 percent of all births were low birth weight infants (191). In 1981, the infant mortality rate among Indians (13.3 per 1,000 live births) exceeded that for the U.S. all races, 11.9 per 1,000 live births, but was lower than the infant mortality rate of 17.8 per 1,000 for nonwhite Americans (see ch. 4) (191). On the basis of these figures, it is not possible to assert that high-cost care for low birth weight infants is a substantially greater or lesser problem in IHS than in the general population.

As shown in chapter 4, the leading causes of death in Indians residing in IHS service areas (age-adjusted mortality rates) are heart disease (166.7 deaths per 100,000) and accidents (136.3 deaths

per 100,000). For accidents, chrome liver disease and cirrhosis, diabetes mellitus, pneumonia and influenza, homicide, suicide, and tuberculosis, age-adjusted mortality rates for American Indians exceed rates in the general population. Complications of pregnancy, childbirth and puerperium, and injuries and poisonings are the two leading categories of hospitalization for all IHS general medical and surgical patients, direct and contract care combined (191). This is not inconsistent with the pattern of high-cost hospitalizations, but because of differences in coding, more detailed comparisons are not useful.

Table 6-11 presents the 524 high-cost cases identified for fiscal year 1983 distributed by the number and percent of cases in each IHS area, by cause category. Too much should not be made of these data because of the small numbers of cases reported by several areas, and because differences in contract care authorization policies among the areas (which relate to funding levels and the availability of direct care services) may affect the distributions by cause more than actual incidence of the conditions. No data were available in fiscal year 1983 from California or Tucson, and the small numbers of cases included from the Bemidji, Nashville, and Oklahoma IHS areas make those distributions unrepresentative. The number and distribution of high-cost cases from Albuquerque also seems atypical. Some of the variations probably are due to different medical coding habits, because "other" diagnoses categories ranged from 6.4 percent of the cases in Alaska to 32.4 percent in the Albuquerque area, while 16.4 percent of all cases were so coded throughout IHS.

Given these caveats, however, extreme variations from the overall IHS distribution by cause in individual IHS areas might indicate a need for further investigation. For example, in the Alaska area there appears to be a very high proportion of high-cost contract care cases due to complications of pregnancy and premature births, 37.2 percent of the cases, compared with 20.6 percent of the 1983 high-cost cases throughout IHS. One explanation for this high rate might be the limited obstetrical and neonatal care capabilities of Alaska bush hospitals and the high cost of transporting patients to the Anchorage Indian medical center. Inquiry to the Alaska area office revealed that al-

Table 6-11.—High-Cost Cases in the IHS Contract

Causes	IHS total		Aberdeen		Alaska		Albuquerque	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Complications of pregnancy, childbirth, and puerperium . . . . .	108	20.6	16	21.6	35	37.2	2	5.9
1. Prematurity . . . . .	78	14.9	9	12.2	30	31.9	1	2.9
2. Congenital anomalies . . . . .	13	2.5	5	6.8	1	1.1	1	2.9
3. Neonatal complications associated with delivery . . . . .	11	2.1	2	2.7	4	4.3	0	0.0
4. Maternal complications . . . . .	6	1.1	0	0.0	0	0.0	0	0.0
Infections . . . . .	59	11.3	14	18.9	9	9.6	2	5.9
5. Respiratory . . . . .	26	5.0	5	6.8	6	6.4	1	2.9
6. Other . . . . .	33	6.3	9	12.2	3	3.2	1	2.9
Trauma . . . . .	131	25.0	17	23.0	21	22.3	10	29.4
7. Motor vehicle . . . . .	20	3.8	2	2.7	2	2.1	4	11.8
8. Violence . . . . .	14	2.7	2	2.7	2	2.1		2.9
9. Other trauma . . . . .	78	14.9	9	12.2	10	10.6	5	14.7
10. Burns . . . . .	18	3.4	4	5.4	7	7.4	0	0.0
11. Poisonings . . . . .	1	0.2	0	0.0	0	0.0	0	0.0
Malignancies . . . . .	30	5.7	2	2.7	10	10.6	3	8.8
Cardiovascular . . . . .	63	12.0	7	9.5	7	7.4	4	11.8
<b>13. Heart</b> . . . . .	46	8.8	1	1.4	6	6.4	3	8.8
14. Vascular system (emboli, aneurysms; including strokes) . . . . .	17	3.2	6	8.1	1	1.1	1	2.9
Digestive system (except infections, malignancies) . . . . .	47	9.0	5	6.8	6	6.4	2	5.9
Other . . . . .	86	16.4	13	17.6	6	6.4	11	32.4
<b>16. Diabetes</b> . . . . .	2	0.4	0	0.0	0	0.0	0	0.0
<b>17. End-stage renal disease</b> . . . . .	11	2.1	1	1.4	0	0.0	3	8.8
<b>18. Alcoholism</b> . . . . .	1	0.2	0	0.0	0	0.0	1	2.9
19. All others . . . . .	72	13.7	12	16.2	6	6.4	7	20.6
<b>All causes</b> . . . . .	<b>524</b>	<b>100.0</b>	<b>74</b>	<b>100.0</b>	<b>94</b>	<b>100.0</b>	<b>34</b>	<b>100.0</b>

aPercentages are calculated on columns to show distribution of cases by cause within the areas.

bThere were no data from California and Tucson.

cData from Bemidji, Nashville, and Oklahoma may be incomplete.

SOURCE: U.S. Congress, Office of Technology Assessment, with data from U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, contract care program special data collection, fall 1984-spring 1985.

though field hospital limitations and consequent transportation costs were a factor, the main reason that premature infants stand out as high-cost cases in the contract care program is that the Anchorage IHS hospital is capable of providing nearly all specialty services directly, including trauma care and a level II premature nursery, but neonatal cases requiring the most intensive care in a level III nursery (usually long-term ventilator patients) must be referred out under contract care (112).

High-cost contract care cases due to infections were above the IHS average in the Aberdeen area; trauma referrals were somewhat high in Albuquerque; and in Billings, cardiovascular and diges-

tive system high-cost cases exceeded proportions found throughout IHS. In the Navajo area, complications of pregnancy, premature births, and trauma were more frequently the causes of high-cost cases than in IHS generally. In Phoenix and Portland, on the other hand, high-cost referrals due to complications of pregnancy and prematurity were well below IHS averages. These are the types of variations that would be worth exploring in a more complete and accurate data set.

### Would a \$12 Million Catastrophic Fund Be Adequate?

The Indian Health Care Amendments proposed in 1984 and 1985 would have provided for a cat-

Care Program by Cause and Area, Fiscal Year 1983<sup>ab</sup>

Bemidji <sup>c</sup>		Billings		Nashville <sup>c</sup>		Navajo		Oklahoma <sup>c</sup>		Phoenix		Port land	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	0.0	16	18.0	1	50.0	19	25.0	0	0.0	15	16.1	4	7.8
0	0.0	10	11.2	1	50.0	14	18.4	0	0.0	9	9.7	4	7.8
0	0.0	3	3.4	0	0.0	2	2.6	0	0.0	1	1.1	0	0.0
0	0.0	0	0.0	0	0.0	3	3.9	0	0.0	2	2.2	0	0.0
0	0.0	3	3.4	0	0.0	0	0.0	0	0.0	3	3.2	0	0.0
0	0.0	7	7.9	0	0.0	8	10.5	0	0.0	9	9.7	10	19.6
0	0.0	2	2.2	0	0.0	4	5.3	0	0.0	5	5.4	3	5.9
0	0.0	5	5.6	0	0.0	4	5.3	0	0.0	4	4.3	7	13.7
0	0.0	20	22.5	0	0.0	23	30.3	3	33.3	24	25.8	13	25.5
0	0.0	0	0.0	0	0.0	6	7.9	0	0.0	3	3.2	3	5.9
0	0.0	4	4.5	0	0.0	0	0.0	0	0.0	3	3.2	2	3.9
0	0.0	16	18.0	0	0.0	12	15.8	2	22.2	18	19.4	6	11.8
0	0.0	0	0.0	0	0.0	5	6.6	1	11.1	0	0.0	1	2.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.0
0	0.0	3	3.4	0	0.0	3	3.9	0	0.0	5	5.4	4	7.8
0	0.0	16	18.0	1	50.0	11	14.5	1	11.1	12	12.9	4	7.8
0	0.0	12	13.5	1	50.0	8	10.5	1	11.1	11	11.8	3	5.9
0	0.0	4	4.5	0	0.0	3	3.9	0	0.0	1	1.1	1	2.0
0	0.0	12	13.5	0	0.0	6	7.9	4	44.4	4	4.3	8	15.7
2	100.0	15	16.9	0	0.0	6	7.9	1	11.1	24	25.8	8	15.7
0	0.0	1	1.1	0	0.0	0	0.0	0	0.0	1	1.1	0	0.0
0	0.0	0	0.0	0	0.0	2	2.6	0	0.0	5	5.4	0	0.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	100.0	14	15.7	0	0.0	4	5.3	1	11.1	18	19.4	8	15.7
2	100.0	89	100.0	2	100.0	76	100.0	9	100.0	93	100.0	51	100.0

astrophic health emergency fund of \$12 million to absorb costs to IHS service unit contract care programs exceeding a threshold of between \$10,000 and \$20,000 per case. The service unit would be responsible for IHS expenditures up to the threshold amount, and then could turn to the national fund for the remainder of the bill. Table 6-12 shows what the costs to such a catastrophic fund might be, by IHS area, given fiscal 1983 high-cost case experience with hospital disbursements only and thresholds set at \$10,000, \$15,000, and \$20,000. The effects of these thresholds were calculated separately for each IHS area, because with their different average costs per case, the areas might expect varying levels of relief from the catastrophic fund. It may be noted that IHS areas

that now cannot afford to purchase much inpatient contract care, such as California and perhaps Bemidji, would not benefit from the special fund because they cannot afford to spend up to the threshold figure to qualify for catastrophic fund relief.

Based on 1983 high-cost case experience, if the threshold were set at \$10,000 per case, the catastrophic fund would be tapped for at least \$5.5 million to cover IHS contract hospital expenditures alone. Areas with higher average costs per case, such as Alaska, could expect the most relief. If the threshold were set at \$15,000, total outlays would be \$3 million, minimum, and 2 of 10 IHS areas in the 1983 data set would not benefit

**Table 6-12.—Hospitalization Costs to Catastrophic Fund at Various Thresholds, Fiscal Year 1983 Data**

Area	Number of cases	Total cost	Costs to fund if threshold at: <sup>a</sup>		
			Threshold \$10,000	Threshold \$15,000	Threshold \$20,000
Aberdeen . . . . .	74	\$ 1,291,481	\$ 551,481	\$ 181,481	\$ —
Alaska . . . . .	94	2,859,738	1,919,738	1,449,738	979,738
Albuquerque . . . . .	34	682,911	342,911	172,911	2,911
Bemidji <sup>b</sup> . . . . .	2	22,485	2,485	—	—
Billings . . . . .	89	1,750,740	860,740	415,740	—
California <sup>c</sup> . . . . .	—	—	—	—	—
Nashville <sup>b</sup> . . . . .	2	58,782	38,782	28,782	18,782
Navajo . . . . .	76	1,653,086	893,086	513,086	133,086
Oklahoma <sup>b</sup> . . . . .	9	107,271	17,271	—	—
Phoenix . . . . .	93	1,422,039	492,039	27,039	—
Portland . . . . .	51	918,985	408,985	153,985	—
Tucson <sup>c</sup> . . . . .	—	—	—	—	—
IHS all areas . . . . .	524	\$10,767,518	\$5,527,518	\$2,942,762	\$1,134,517

<sup>a</sup>Costs to the catastrophic fund by area precalculated by multiplying the threshold amount by the number of cases and subtracting that result from the total cost of the cases in 1983.

<sup>b</sup>Reporting from Bemidji, Nashville, and Oklahoma may be incomplete.

<sup>c</sup>No data were reported for California or Tucson.

SOURCE: U.S. Congress, Office of Technology Assessment, with data from U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, contract care program special data collection, fall 1984-spring 1985.

at all. A \$20,000 threshold would reduce demands on the catastrophic fund to about \$1.2 million and assist only 4 of 10 areas.

The figures in table 6-12 represent IHS disbursements for hospital charges only, but in practice the catastrophic fund would cover all charges above the threshold. It is useful, therefore, to attempt to estimate the amounts of additional, non-hospital costs that would be covered by the fund. IHS data on which to base such estimates are limited. The Portland IHS area was able to provide expenditures for its recent high-cost cases broken down by billing cost center. Data for 37 cases paid out of the 1984 Portland area catastrophic contingency fund showed hospital charges to be 84 percent of total disbursements. Physician services associated with inpatient care but billed separately represented 14 percent, and all other charges to the contract care program for outpatient physician services, outpatient X-rays, drugs, supplies, and soon amounted to 2 percent of the total (198). Physician services at 14 percent of total hospital-related costs per case seem low, especially in view of data from national health expenditure studies that show physician fees at about 22 percent both of all health expenditures and of all expenditures related to inpatient care (36). The difference may result from how physician services are billed: it is likely that the

services of some hospital staff physicians are included in hospital bills to the IHS contract care program (58).

Portland IHS officials have estimated physician costs associated with hospitalizations in the area's overall contract care program to be as high as 30 percent (107). IHS headquarters program statistics staff report that for the IHS contract care program in fiscal year 1984, physician fees represented about 25 percent of total contract hospital expenditures per case; and that proportion applied to the Portland area as well (58). Table 6-13 summarizes the effects of these estimates of additional nonhospital charges on the potential costs to an IHS catastrophic fund at thresholds of \$10,000, \$15,000, and \$20,000.

It is important to note that the base figures used in table 6-13 are taken from table 6-12, which presents the effects of three cost-per-case thresholds on numbers of IHS high-cost cases identified in 1983, in 1983 dollars. For a number of reasons, the 1983 data set may not include all high-cost contract cases; and it is known that only contract hospital disbursements are reflected in the cost figures. Even with these reservations, and with the inclusion of estimated nonhospital costs ranging from 16 to 30 percent, according to the calculations in table 6-13 it appears that in 1983 a

**Table 6-1 3.—Estimated Total Costs to the IHS Catastrophic Fund at Different Thresholds, Based on Fiscal Year 1983 Experience**

Number of fiscal year 1983 cases for which IHS hospital expenditures per case exceeded \$10,000: 524 cases  
 Total IHS hospital expenditures for the 524 cases in fiscal year 1983: \$10,767,518

Estimated total IHS disbursements for 524 cases, adding physician inpatient charges	Estimated costs to fiscal year 1983 catastrophic fund for 524 cases with threshold set at:		
	\$10,000	\$15,000	\$20,000
at 16% of total <sup>a</sup> = \$12,818,473	\$7,578,473	\$4,958,473	\$2,338,473
at 22% of total <sup>b</sup> = \$13,804,510	\$8,564,510	\$5,944,510	\$3,324,510
at 30% of total <sup>c</sup> = \$15,382,168	\$10,142,168	\$7,522,168	\$4,902,168

<sup>a</sup>Portland area data for 37 cases paid from 1984 catastrophic contingency fund 16 percent of total IHS disbursements for those cases were for other than hospital charges, e.g., physician services to inpatients billed separately, and outpatient charges

<sup>b</sup>DM Gibson and DR Waldo, "National Health Expenditures, 1981," *Health Care Financing Review* 4(1):1-35, September 1982 physician fees represent approximately 22 percent of all expenditures related to inpatient care

<sup>c</sup>Portland area IHS Officials estimate physician fees associated with inpatient services in the area's total contract care program at a maximum 30 percent. This high estimate is supported by IHS headquarters Program Statistics Branch staff: physician fees represent about 25 percent of total contract hospital expenditures per case throughout IHS and in the Portland area

SOURCE U.S. Congress, Office of Technology Assessment, with data from U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, contract care program special data collection, fall 1984-spring 1985, and assumptions cited in notes, above

\$12 million catastrophic fund probably would have been adequate to meet expected demands on it, whether the threshold was set at \$10,000, \$15,000, or \$20,000.

In a high-cost contingency fund that could become available no earlier than fiscal year 1986, however, the effects of 3 years' health cost inflation could be substantial. A threshold of \$10,000 per case would include more of the total IHS contract care cases in 1986 than in 1983, based on increases in billed charges alone. With contract hospital charges inflated at private sector rates, a fund of \$12 million would not go as far in 1986 as in 1983. Problems in identifying high-cost case records to make up the data sets for this analysis suggest that undercounting of cases may be considerable. There were **524 cases** identified for fiscal year 1983 and, originally, 390 cases for 1984. When the 1984 billing file was searched again in October 1985, however, **746** high-cost case records were found. Such uncertainties about the numbers of high-cost cases that may be expected annually justify concerns for the adequacy of a \$12 million fund. Finally, in most IHS areas (excepting perhaps Alaska and Portland), high-cost cases in tribally operated **638** contract care programs have not been included in IHS contract care program data systems. If the catastrophic fund is implemented as proposed, **638** contract care programs would be eligible to use it along with IHS-administered contract care programs. No information is available at present to estimate the numbers of additional cases that could draw on

the high-cost case contingency fund from **638** contract care programs.

### Managing High-Cost Cases in the IHS Contract Care Program

Although high-cost cases are known to have negative effects on the delivery of contract care in most IHS areas, at present there is no headquarters policy or program designed to help ease this problem. A headquarters level contingency fund similar to programs operating in the Alaska and Portland IHS areas apparently has been considered, but has not been implemented because of fears that it would be politically unworkable. IHS maybe relying on the proposed catastrophic health emergency fund to relieve pressures on its contract care budgets. Reauthorization of the Indian Health Care Improvement Act would be necessary, however, and there still would be difficulties in establishing a system to administer such a program.

In the meantime, headquarters has developed no special policies or guidelines for the areas and service units, but has delegated responsibility for high-cost case management to those field offices. Headquarters becomes involved only if there is an extraordinarily expensive case, such as a child requiring liver transplantation for biliary atresia or an accident with multiple burn victims. Headquarters then may attempt to reprogram funds to assist in paying for such cases. Like other Federal health programs, IHS does not authorize payment

for treatments judged to be experimental, i.e., liver transplants for other than biliary atresia, heart transplants, pancreas transplants, and other emerging procedures.

IHS area offices of necessity have tried to deal with the effects of high-cost cases, and they have approached the problem in a number of ways. Perhaps the most effective is the areawide catastrophic contingency fund approach. The Alaska area office has been withholding a contingency fund for many years, and 638 programs participate in the fund on the same terms as IHS-operated contract care programs. A fund of between \$2 and \$3 million was withheld in fiscal year 1985. The threshold was raised from \$5,000 per case to \$15,000 per case in mid-1984. Alaska works aggressively to collect from third-party payers as another means of reducing its contract care expenditures (8).

The same management approach is applied in the Portland IHS area, where there are no IHS direct care hospitals and all inpatient services not covered by other payers must be purchased by the contract care program. A labor-intensive manual system of monitoring costly cases has been developed there, and as noted earlier, disbursement reporting by cost center is maintained. There is general agreement among Portland area tribes that the fund has improved the situation, but pressures on contract care budgets still are extreme. Also, the contingency fund has the disadvantage that if too much is put aside for high-cost cases that do not occur, then a substantial amount of money has been withheld from service unit contract care programs, and needed services may have been denied or deferred to stay within the service unit's allocation. If the catastrophic demand is less than expected, the Portland area spends contingency funds remaining at the end of the year on lists of deferred contract care cases.

The Oklahoma City IHS area removed its contract care cap of \$3,000 per case in April 1985 and instituted a catastrophic fund. The area has set aside 5.3 percent of its contract care allocation, or \$600,000 in fiscal year 1985, to be available to its service units (excluding the Pawnee Benefit Package Program and 638 contract care programs). Written guidelines specify a threshold of

\$15,000 total costs per case, which raises the question of whether all service units would want to participate because of the requirement to spend up to the \$15,000 threshold (197).

Contract care program policies for managing high-cost cases have not been studied in detail in all IHS areas. It has been reported that service units in areas without contingency funds attempt to manage their programs by monitoring expenditures closely against their quarterly budget allocations. Other factors that affect service unit costs for catastrophic care include the extent to which alternate resources (third-party payers) are available and pursued. Areas with IHS hospitals can reduce their expenditures in high-cost cases by providing care in IHS facilities before and after referral to contract providers. This is not an option in all areas, however, and the capabilities of available IHS hospitals affect the usefulness of this approach.

## Conclusions

The question is, how can the IHS contract care program best manage and pay for high-cost care for its service population? If the problem is primarily one of budget management, the feasibility of implementing programs such as the contingency funds in the Alaska and Portland IHS areas might be considered for all IHS areas. Private reinsurance is not a realistic option at this time because IHS lacks adequate data to describe the extent of the problem: data on patient demographics, numbers of high-cost cases, and causes are inadequate or nonexistent. The population at risk and the numbers of high-cost cases even at the national level may be too small for private reinsurance; and most insurance plans are designed to protect individual patients from excessive costs of care, not public program budgets. Information to describe the contributions of other third-party payers in IHS contract care is completely inadequate, and this certainly would affect any plans for reinsuring the program privately.

The most feasible interim approach to easing the problem of high-cost cases in the IHS contract care program may well be something along the



lines of the proposed revolving fund. It would recognize the immediate problem, budget effects, and would seek to deal with it within the program's existing budget framework through uniform national administrative policies. Such a fund would provide some relief to contract care budgets and to Indians requiring contract care in some IHS areas. In other areas, however, contract care funding already is inadequate to permit the area to spend up to the \$10,000 to \$20,000 threshold in order to take advantage of the contingency fund. This problem might be overcome by adjusting the threshold to reflect differences in costs of care among IHS areas.

Finally, it is not realistic to expect high-cost cases to be managed effectively in health delivery systems as small as many IHS service units. Some service units have eligible populations under 10,000 and contract care budgets of several hundred thousand dollars to pay for a year's services. The IHS policy of decentralizing responsi-

bility for health care delivery to the service unit level, including management of contract services, is contradictory to the principle of sharing the risk for exceptionally costly cases.

There may be some question as to whether all IHS area offices have large enough contract care budgets to effectively manage high-cost cases. Some areas are attempting to make budget adjustments among their service units for these unexpected costs, with some success; but this is being done at the expense of funding for the overall contract care program. An additional fund for high-cost cases would assist some of these areas. If an acceptable formula could be developed for allocating an IHS high-cost contingency fund among the areas, it might be worth considering whether the fund would be administered more effectively at the IHS area office level than at headquarters, because the area offices are most familiar with their contract providers and with the management problems involved.

## IHS DATA MANAGEMENT ISSUES

It has not been the purpose of this OTA assessment to conduct a complete and systematic evaluation of IHS management practices and information systems. Nonetheless, after a year's experience in working with a variety of IHS offices and staff (primarily at or through IHS headquarters) to obtain data for the Indian health services analysis, some general observations about IHS data systems may be made.

IHS depends on an array of uncoordinated service-specific data systems that has developed over the years in response to particular information needs. None of the IHS data systems has been designed specifically to provide consistent, reliable information for national program management and reporting requirements. IHS's delegation of many management responsibilities to its area offices has contributed to a lack of incentives to establish uniform national data systems, a situation that continues to exist in 1985. Although there has been recent recognition in IHS of the need for national data, and planning efforts to meet those needs are underway, the efforts are not near to producing results.

One example of how IHS data systems are not designed to respond to national policy and management questions relates to the proposed \$12 million catastrophic health emergency fund (see the preceding section of this chapter on high-cost cases). In considering reauthorization of the Indian Health Care Improvement Act in 1984, which included the catastrophic fund, congressional committees requested data to describe the problem of high-cost cases in the IHS contract care program. IHS responded with an estimate of 400 cases annually costing \$25,000 or more, anecdotal reporting of the causes, and no actual case counts by area or total. There was an ad hoc attempt at data collection late in 1984, followed by development of a detailed plan to manipulate existing IHS data files, which was not implemented. By fall 1985, OTA had obtained three different lists of fiscal year 1984 cases that reportedly had cost IHS \$10,000 or more, generated from various IHS data systems and ranging in number from 390 to nearly 750 cases. Over a year after the initial congressional request, IHS still was unable to produce reliable basic descriptive data on its high-cost cases.

Many existing IHS data systems do not generate complete and consistent information for all 12 IHS areas. Some of the systems are automated, some are not; some systems are automated in certain IHS areas but not in others. Little effort has been made in the automated systems to use hardware and software that are compatible among the areas, and this has created unnecessary complications and expenses in attempting to aggregate data from the different area systems. Service-specific IHS cost data are virtually nonexistent because facilities and programs operate within annual budgets, but are not otherwise required to account for or report detailed annual operating costs.

The Patient Care Information System (PCIS) is an example of the lack of consistency among IHS area data systems. The PCIS, which is perhaps the most ambitious automated data system to be developed in IHS, has been implemented in only 3 of 12 areas (Tucson, Alaska, and Billings), reportedly because of its high implementation and operating costs. An outside consultant's evaluation of the system in 1984 found that the total cost of operating PCIS in three areas was about \$2,4 million per year, or \$3.00 per encounter, in comparison with \$0.80 per encounter for data reporting to the Ambulatory Patient Care system that exists in other IHS areas (55). The consultants also found substantial differences in PCIS operating procedures among the three areas, including use of a different basic encounter form in Billings, and significant delays in Alaska and Billings between patient encounter and data availability compared with on-line data retrieval and flexible report generation capabilities in Tucson, the area where the system first was developed and implemented in 1975. Two points may be made in this example: first, an expensive automated patient data system was implemented without consistency in only 3 of 12 IHS areas; and second, the system was not developed by IHS headquarters to meet national program management needs, but by one of the areas (Tucson) to meet its own particular research interests.

Even in IHS data systems that are used to monitor and report on the national program (in the IHS Chart Series Book, for example, or in annual budget justification documents), IHS headquar-

ters does not take an active role in defining data reporting procedures, ensuring consistency among the areas, and validating the completeness and accuracy of data reporting. Beyond the minimal computer edits that are run on some incoming records, it is IHS headquarters policy to accept data as reported by the areas. In the IHS contract care "piggyback" data system that maintains expenditures by cost center and object class, for example, flexibility is allowed to the areas in accounting the costs of services delivered under contract, but in an IHS facility, as either a direct care or contract care program cost.

Another major impediment to the generation of complete and consistent IHS data is the exemption of self-determination (638) contract programs from IHS data reporting requirements. Tribal **638 contractors** may voluntarily elect to participate in existing IHS data systems, using IHS data collection forms. Such participation has not been required, however, and most 638 contractors do not operate within IHS data systems. This loss of clinical, utilization, and management data due to the nonparticipation of 638 contractors is a serious problem now and will become more serious as more services are transferred to tribal management, as is the expressed intent of the Administration and Congress. IHS recognized the need to correct this problem and issued a memorandum in November 1985 requiring uniform reporting for inpatient services, ambulatory medical services, and contract health services with standard IHS record formats from all new and renewal 638 contracts, effective immediately (50).

Currently, **20 to 30** percent of the total IHS clinical services budget is administered by the tribes under 638 contracts. Many tables in this report that present IHS data are noted to be incomplete because of the absence of data from 638 contractors. Interpretation of some data sets is further complicated by the fact that IHS area reporting gaps due to 638 contracting vary in their importance, because the level of 638 contracting by area varies considerably. Data for the California area, where most IHS services are delivered under 638 contracts, are particularly affected by this non-reporting problem. The Nashville and Bemidji IHS areas, also active in 638 contracting, are also affected. In providing data on all 12 areas, IHS gen-

erally does not attempt to correct or adjust for data gaps such as these.

OTA staff had difficulty obtaining data from IHS headquarters to describe the 638 program even in simple terms (e.g., numbers of active contracts and dollar amounts, by area). The administration of 638 contracts is viewed entirely as an area office responsibility, and therefore the collection, maintenance, and analysis of data to monitor 638 contract performance are area office functions. Information reported in the IHS Chart Series Book is for total IHS only, not by area; and it is not clearly indicated that in some tables “tribal contracting” includes both 638 and Buy Indian contracts (191). IHS sources have expressed reservations about the Tribal Resource and Assistance Information System data used in some Chart Series Book tables, because contracts are not always removed from the file when they expire, resulting in overstatement both of numbers of contracts and of dollar amounts (details of these data problems were described earlier in this chapter) (216). In late 1985, the lack of basic information on the scope of the 638 contract program led IHS to conduct a survey of all tribes to collect accurate information on active contracts, dollar amounts, 638 project staffing, and other matters. The results of that survey were not available to this study, but an interim report on the project was published in February 1986 (186).

IHS data systems are especially weak when it comes to data on the costs of providing specific health services through different IHS programs and facilities to different population groups. Because IHS must pay private providers for services authorized to IHS-eligible Indians under the contract care program, reasonably accurate data on those expenditures (not costs) by cost center and object class are maintained in the IHS contract care “piggyback” data system (part of the HRSA-PHS financial accounting system) (58). But cost accounting data relative to services delivered by IHS direct care facilities are not requested or maintained either by IHS area offices or by headquarters. As a result, IHS is unable to determine in any detail how much it costs to provide a particular package of services in a given area.

This lack of information to describe the costs of IHS direct services is an obstacle to 638 con-

tracting, because it leaves open to dispute the amount of contract funding that should be transferred to tribal control. The lack of cost information also makes it difficult for IHS to compare the costs of directly providing a service with the costs of buying it from the private sector under contract, thus undermining the ability of program managers to make cost-effective decisions about services delivery.

IHS is not required by law or regulation to provide a uniform package of health services to eligible Indians throughout the country. Therefore, it has not been necessary to collect data nationally that could be used for national or area-specific health services planning. IHS headquarters and area offices do not plan services delivery on the basis of epidemiologic or socioeconomic data for eligible or user patient populations. Data systems such as the PCIS are designed for clinical management purposes; but they are not implemented throughout IHS, and the data they generate are not applied to services planning or administration. Data supporting the RRM system relate manpower needs to service-specific workloads. Although this type of service planning goes into preparations for new or replacement facilities construction, RRM-based estimates of resource needs do not affect budget allocations among the areas except in the small equity fund distributions. To some degree, IHS services are delivered in response to expressed demand (historical utilization patterns); but this is not the result of planning based on a population’s defined health problems and needs.

It is likely that much more information could be derived from existing IHS data systems than currently is being sought and used. It appears that a great amount of data is being collected by IHS and its areas, but there is no overall framework or purpose guiding that data collection. The IHS Office of Program Statistics, for example, produces a variety of reports that could be useful to program management; but while the information may figure in the annual budget justification or in new facility plans, it is not applied systematically for program management purposes.

An assessment and coordination of existing data systems could be undertaken as an interim solution, while plans are made for implementation of

a more rational and cost-effective national system. Where resources for services delivery are seen as chronically inadequate, however, as in IHS, any funds spent on data systems are likely to be viewed as better spent on direct services. When it comes to the data collection and reporting that must take place in the service units and IHS area offices, where staff may feel overworked already, resistance to additional demands and lack of time may undermine complete and accurate data reporting. Attitudes and work priorities such as these might be modified by intensive management efforts to define and demonstrate the usefulness of the information.

In times of stable or declining IHS budgets, pressures to spend every available dollar on direct service delivery will be great. The payoff for better management data will have to be found in increased program efficiency and effectiveness: getting more services for the same dollars by better management. This might require staff expertise not widely available in IHS (and which might be particularly limited in future supply under Indian preference in hiring regulations as IHS Indian manpower development funds are reduced).

IHS has acknowledged its data systems problems and is working toward improvements. Since 1980, IHS headquarters has taken a greater interest in data systems for management purposes by creating a high-level staff position for management information systems and appointing two ad hoc data system advisory committees. In spring of 1982, a new in-house group at IHS began to define and investigate the issues involved in a data systems master plan (this was the Service Unit Automation Task Group). In February 1983, a document titled "Planning for an Information Management System" was produced. Although that document was judged too abstract to serve as an implementation plan, it recommended that IHS work with General Services Administration consultants to develop the implementation plan, and that recommendation culminated in an inter-agency agreement with the General Services Administration in June 1983. The IHS liaison group designated to work with the General Services Administration, the IHS Information Systems Strategic Planning Task Force, produced a first iteration of the 5-year strategic information plan

for implementation beginning in fiscal year 1984. The task force's review of existing IHS data systems and its approach to information management was quite critical. It found (49):

IHS data systems were large and unwieldy, tended to collect large volumes of data with great redundancy and without clear purpose, were expensive, and most important, only partially succeeded to produce information that was useful in the field for patient care and program management, or in headquarters for policy decisions and response to concerns of higher levels of the Federal Government.

The task force proposed a plan to guide future administration of information systems in IHS. Data systems should be able to evolve to meet changing needs; information activities should relate clearly to IHS objectives; the plan should promote coordination and control of existing and new systems; and the system should be a distributed data processing framework to promote local control. Implementation of such a system would require strong top management support and clarification of relations and responsibilities between area offices and headquarters.

Late in 1985, work continued in IHS to develop detailed specifications for the outputs, hardware, and software needs of the new strategic information system, known as the Resource and Patient Management System (219). Funding for system development and operation is not assured, but the Administration's fiscal year 1987 IHS budget proposal includes \$2.5 million for data system support (178).

In summary, as budgets become more constrained there will be pressures within IHS to direct all available funds to direct patient services, rather than to functions viewed as peripheral and supportive, such as data systems. The balancing of these conflicting demands will not be easy. In view of the uncertain outcome of these conflicts and of the continuing inability of IHS data systems to respond to clinical and program management information needs, much more could be done to improve and coordinate existing data systems to generate usable information for the interim. In spite of the clear need for improved IHS data capabilities, it may be overly optimistic to expect adequate funding for development and im-

plementation of a new, state-of-the-art management information system. The question might be asked, however, at what cost are so many partially redundant data systems being maintained, and how would those costs compare with the esti-

mated costs of implementing a new, comprehensive data system? It is likely that money could be saved by careful integration of existing systems, and that would seem to be a realistic goal for the immediate future.