Introduction

The Indian Health Care Improvement Fund (IHCIF) was established by the Indian Health Care Improvement Act (P.L. 94-437, Section 201) and amended twice (P.L. 100-713, P.L. 102-573). The law requires that the Secretary submit to Congress a “resource deficiency report of the Service for each Indian tribe or service unit.” The Level of Need Funded (LNF) Workgroup developed a methodology to accomplish this objective and published two reports.

All of the tribes in the Oklahoma City Area Indian Health Service expressed unanimous support for LNF to Dr. Michael Trujillo, Director of the Indian Health Service (IHS), in a letter dated April 17, 2000. That letter urged Dr. Trujillo to “apply the results of the Level of Need Funded methodology to all new dollars received by the Indian Health Service in FY 2000 and forward.”

Congress appropriated $10 million in FY 2000 for the IHCIF. Dr. Trujillo decided that $9 million would be allocated using the LNF formula and $1 million would be allocated using the CHS formula. This allocation was done on a one-time basis with the decision reserved about how to allocate IHCIF funding in the FY 2001 budget.

The FY 2001 budget has $40 million for IHCIF. The Interior Appropriations Conference Report 106-914 contains the following language providing direction to the IHS:

The Service should distribute the Indian health care improvement fund in accordance with the level of need methodology to ensure that the most underfunded tribes are funded at more equitable levels. There should be no set-aside of a portion of these funds to be distributed under an alternative methodology. The managers recognize that the LNF methodology may need some improvements and the Service should continue to make the necessary refinements.

The Service should report to the House and Senate Committees on Appropriates prior to finalizing any policy on the distribution of the Indian health care improvement fund for fiscal year 2001. The managers urge the Service to establish a minimum level of funds to be provided to individual service units. The Service also should provide a report on how the fiscal year 2000 funds were used to improve services to Indians and Alaska Natives.
Acknowledging that the LNF methodology may need some improvements and that tribes must be consulted prior to finalizing the allocation formula for the IHCIF, IHS is holding meetings with the intent to distribute the FY 2001 IHCIF money by March 1, 2001.

This position paper on behalf of the Oklahoma tribes addresses some of the issues that have been raised regarding the IHCIF from the perspective of the Area with the largest population of American Indians in the country. The Oklahoma Area serves over 20 percent of the American Indians and Alaska Natives (AI/AN) in the United States.

Oklahoma tribes recognize that the entire Indian health care system is underfunded.

We share the pain of knowing that American Indian and Alaska Native people everywhere are suffering and dying because they do not have access to health care. With the average of 60 percent of level of need funded, we recognize that those who are above the average are still underfunded. We join other tribes in advocating for full funding of the Indian health system. However, we ask those that are above the average to recognize our desperate situation. The per capita funding for Indians in Oklahoma is only $856 per year, the lowest of any Area. This is less than 29 percent of the cost of the federal employees benefit package, the mainstream health care benefit package used as the benchmark for LNF.

The IHCIF is a very small portion of the IHS budget intended to bring greater parity into health care funding.

The $40 million appropriated by Congress for the IHCIF in FY 2001 represents only 1.5 percent of the $2.6 billion IHS budget.
The Oklahoma tribes have never advocated the redistribution of existing funding to take money away from tribes that have higher per capita funding to give it to tribes with less funding. But, we believe that the new monies provided by IHCIF should be used to help bring those at the bottom of the funding ladder to a higher level.

**Distribution of the FY 2001 IHCIF funding should be made as quickly as possible to help the people whose needs are not currently being met.**

Last year, the distribution of IHCIF funding was delayed until the end of the fiscal year. We must do a better job of getting IHCIF money to the service units and tribes in a timely way. We have had years to develop the LNF formula and have access to some of the best experts in the country to help us apply the actuarial approaches that are the standard in health care financing. Now is not the time to reinvent the wheel. The refinements that are needed include the correction of user population figures, the updating of certain numbers in the formula, and the reassessment of the definition of operating units in some cases. This should be accomplished quickly.

**If a health status measure is used in the IHCIF formula, it should not be Years of Productive Life Lost (YPLL).**

YPLL has nothing to do with the cost of providing health care, but rather reflects the non-medical costs of illness to society like lost wages and unpaid taxes. Any adjustments to LNF should link health status to the cost of care. For a more detailed discussion of these issues, please see Attachment 1, “Selecting Health Status Indicators for IHS Funding Formulas.”

**The “medical model” inherent in the LNF formula is appropriate for the IHCIF allocation.**

There is no other system like the IHS in the country, so it could be argued that nothing can serve as a benchmark. Yet, we all agree that it is very helpful to establish the level of underfunding for the IHS by using a benchmark of a generally accepted funding level for health care. As soon as we choose to use a benchmark, we are limited to using a medical model. Particularly when we use an actuarial approach, we are somewhat limited to considering personal medical services. After allocations are made using the LNF formula, compacting tribes are free to reallocate their funding using whatever model they choose.

The definition of the IHCIF in the Indian Health Care Improvement Act is primarily a medical model that also includes prevention. It specifies the following types of activities: clinical care, vision care, preventive care, screening mammography, dental care, mental health, emergency medical services, treatment of alcohol and other drug abuse, accident prevention, home health care, community health representatives, and
maintenance and repair. There is no mention of other types of activities contained in the IHS budget, such as public health nursing, transportation, water and sewer, and facilities construction. Congress can and will continue to fund those types of activities through other line items that far exceed the $40 million for IHCIF.

The law requires the IHCIF distribution formula to account for alternate resources.

Like other tribes across the country, we assert that the IHS budget should not be offset by Medicaid, Medicare and other alternate resources. However, we recognize that the LNF Workgroup was required to include alternate resources in the formula to determine resource deficiency. The language in the Indian Health Care Improvement Act, as amended, defines health resources as follows:

> The health resources available to an Indian tribe include health resources provided by the Service as well as health resources used by the Indian tribe, including services and financing systems provided by any Federal programs, private insurance, and programs of State of local governments.

We will advocate for this to be changed in the reauthorization of the Indian Health Care Improvement Act. However, at this time it makes sense to follow the law. To tinker with this fairly unsubstantial part of the formula would only delay the distribution of needed funds.

Allocation of FY 2001 IHCIF should be used to help those with the greatest need.

The $40 million in FY 2001 represents only 15 percent of what is needed to raise all tribes to at least the average of 60 percent of LNF. It is only 3 percent of what is needed to raise all tribes to the 100 percent of LNF. In fact, it would take over 33 years at this rate to raise all tribes to 100% of LNF. If this very limited amount of money is spread too thin, no one will realize an appreciable improvement in services.

Finally, to allocate IHCIF to those with the greatest unmet needs is the express intent of Congress, “to ensure that the most underfunded tribes are funded at more equitable levels” (emphasis added).

In summary, the Oklahoma tribes want to see the Indian Health Care Improvement Fund distributed as quickly as possible using the Level of Need Funded formula for the allocation for 2001 funding to those who are below the average funding level.
Attachment 1

Selecting Health Status Indicators for IHS Funding Formulas

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Introduction

Various formulas are used by the Indian Health Service (IHS) to allocate federal funds to IHS Service Units, tribes, and urban Indian programs (I/T/U). These formulas often take into account variables that relate to the cost of providing health services, such as the number of people served and the cost of living in the area.

Some of the formulas also try to take into account that populations with worse health status need more medical care. This is relatively easy to accomplish when the funding is specific to a disease or health condition. For example, the formula for distributing diabetes grants incorporates the prevalence of diabetes. Similarly, funding for injury prevention can use data on deaths due to injury in developing the formula.

Incorporating health status indicators becomes more difficult for the distribution of funds intended to address a broad array of needs, such as funding for Hospitals and Clinics (H&C), Contract Health Services (CHS), or the Indian Health Care Improvement Fund (IHCIF). This paper is intended to identify issues related to the selection of health status indicators for these broad purposes.

Purpose of Indicator

In developing a formula, it is important to understand the purpose of the health status indicator and to select the indicator that achieves that purpose. There is no such thing as an all-purpose health status indicator. As IHS develops broad health program funding formulas, the goal should be to identify health status variables that affect the cost to the I/T/U to provide health services.

Calculating the Cost of Illness

Cost of Illness (COI) methodology has been evolving since the late 1950s and generally includes components of direct costs and indirect costs. Direct costs are closely related to medical care:

Direct economic costs of disease are those generated by the resources used in treating or coping with a disease, including expenditures for medical care and the treatment of the illness (hospital care, physician services, nursing home care,
drugs and other medical needs). These direct costs are often easily measured by surveys and studies. Recently researchers have also advocated the inclusion of direct non-medical costs as well, including the transportation costs of patients and costs of care-giving by family members. (Songer and Ettaro 1998, p.11)

In discussions of Cost of Illness (COI), the term “indirect costs” is not the same as the common usage of “indirect costs” in I/T/U budgets. The indirect costs in I/T/U budgets are actually considered part of the direct costs of providing medical care in calculations of COI. In this paper, the reference to indirect costs is always in the context of COI and health status.

In the context of COI calculations, indirect costs are the costs to society that are not related to the provision of medical services.

Indirect economic costs address the potential resources that are lost as a result of a disease. They include the societal costs of morbidity, disability, and premature mortality. These non-medical costs of disease are not easily measured or calculated. Indirect costs represent the impact, present and future, of opportunities lost to the individual as a consequence of the disease in question. . .

For some time, there has been a great deal of discussion over what items deserve consideration in the measurement of indirect costs. Costs may include lost productivity, caregiver costs, loss of leisure, pain and suffering, and quality of life. Lost productivity is more easily quantified than psychosocial effects. . . Also, including all or several of these costs is problematic because they overlap and therefore may result in a double counting of a portion of indirect costs. (Songer and Ettaro 1998, p. 12)

Indirect costs are not only difficult to measure, but every methodology includes value judgements that weight different factors. For example, the “human capital approach” measures lost wages as a result of premature death or disability. It has been criticized because “it values life in terms of the earnings of individuals” (Songer and Ettaro 1998, p 13). This is the basic premise of measures like Years of Productive Life Lost (YPLL), used as a proxy for indirect cost that considers premature mortality in terms of the value of lost productivity that would have occurred if the individual had lived to the average life expectancy. Valued Years of Potential Life Lost (VYPLL) attempts to calculate wages lost and future income sacrificed by premature death. Another similar measure is the Investment-Producer-Consumer (IPC) Model, which divides a lifetime into three segments and weights them according to whether the individual is more likely to be taking from society or contributing to society economically.

Indirect costs help society to see the total cost of a disease to society, so that spending on research and services to prevent or treat the disease is regarded as a wise investment to lower overall costs to society. These types of indicators may be useful to justify overall health spending, but they are not helpful for the Indian health system to
identify higher cost areas for allocating funding. This is because the I/T/U does not actually incur the indirect costs of illness.

A good health status indicator to use in IHS funding formulas would include only the costs of services that are provided by the I/T/U, not the costs that are incurred by other parts of the health care delivery system or by society as a whole. Thus, the health status indicator should reflect the costs of treating expensive diseases that are disproportionately prevalent in some areas of the IHS. However, it should exclude the costs of health services that are not provided by the I/T/U, such as nursing home care or rehabilitation.

**Years of Productive Life Lost (YPLL) Is NOT Appropriate for Allocation Formulas**

Years of Productive Life Lost (YPLL) is used in the formula for allocating Contract Health Services funding and it has been suggested for use in the Level of Need Funded (LNF) formula. There are problems with using YPLL in IHS distribution formulas.

The first problem, as noted above, is that YPLL is an indicator of the indirect social and economic costs of illness.

It is important to emphasize that YPLL addresses only the impact of social and economic loss from early death, and not the cost of death, preventability of death, or morbidity associated with specific causes of death. Medical and other economic costs related to death from specific causes are not included in any of the YPLL measures. For example, the economic impact of a sudden death at age 45 from an accident or heart attack may differ greatly from the same individual's death at the same age from long-standing cancer or organ disease. (Gardner and Sanborn 1990, p. 329)

Because YPLL does not relate to the cost of medical care, it is not a good health status indicator to use in the distribution of IHS funds.

The second problem is that there are approximately eight different formulas that can be used and each has an inherent bias about the value of life (Gardner and Sanborn 1990). This is further complicated by the fact that YPLL calculations vary in their use of 65, 70 or 75 years old as upper age limit. Some formulas include infant deaths, while others do not. Each infant death accounts for approximately 70 years of life lost, giving it double weight compared to a death at the age of 35. The Investment-Producer-Consumer model is one version of YPLL that is explicit about valuing different ages at death in different ways: investment years (ages 0-19, when society is investing in the individual), producer years (ages 20-64, when the individual is giving to society), and consumer years (older than 65, when the individual is considered to be receiving from

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1 Years of potential life lost (YPLL), two version of premature years of potential life lost (PYPLL), working years of potential life lost (WYPLL), valued years of potential life lost (VYPLL), crude death rate, adjusted death rate, and lifetime cumulative incidence rate.
society). The IPC Model assigns different values to deaths in these different stages of life.

As can be seen from these calculations, the worst case of social and economic loss is death at age 20 (after full investment, but before any productivity) and best at age 65 (after maximum productivity, but before entering consumerism stage. (Gardner and Sanborn 1990, p. 325)

This clearly does not relate to the cost of providing medical care. To the contrary, each type of formula for YPLL assigns priorities to diseases without regard to the cost of care.

In fact, one can choose between heart disease, cancer, or accidents as the leading cause of death, depending on which method one chooses for calculation. (Gardner and Sanborn 1990, p. 326).

The third problem is that YPLL emphasizes deaths at young ages, when approximately 70 percent of deaths occur after age 65 and the older population requires more expensive medical care.

. . .the younger ages always receive the highest weights for PYLL, PYPLL, PYPLL*, and WYPLL. If the objective is simply to emphasize deaths at younger ages, however, then the more straightforward approach is to present the specific mortality rates for those ages rather than use a YPLL measure. (Gardner and Sanborn 1990, p. 326)

In the Indian health system, the leading cause of infant mortality is Sudden Infant Death Syndrome (SIDS) (Regional Differences in Indian Health, 1998-99). Thus, using YPLL in an IHS allocation formula means allocating more money to IHS Areas and Service Units where there are higher rates of SIDS. While SIDS deaths are tragic, there is no cost of providing medical services because the babies die in their sleep without a previous diagnosis.

By contrast, one of the most expensive diseases to treat is diabetes, which is more prevalent in adults than in children in the American Indian and Alaska Native (AI/AN) population. According to one study, individual diabetics spent an average of $9,493 on health care in 1992, the latest data available, compared with $2,604 for people without diabetes (Rubin et al 1992). Another study suggests that in the first year after diagnosis of diabetes, the medical costs are 2.1 times higher for patients with diabetes compared to those without diabetes and this difference grows over time (Brown et al 1999).

In general, more elderly people have more expensive and complicated diseases than younger people. A health status indicator in an IHS allocation formula should provide greater weight to the more costly services to elders, which is just the opposite of the weighting in YPLL.
LNF Formula Considerations

The LNF formula is based on an actuarial model. In general, actuarial models take into consideration the different costs of care for different subgroups in the population. Thus, the actuarial model is usually already adjusted by age to reflect health costs.

We need to ask the following questions: Does the LNF formula use actuarial information to adjust health costs by age? If so, is the information used in the actuarial model based on the U.S. population as a whole, or does it use information specific to AI/AN? If it uses actuarial information based on the U.S. population as a whole, then some adjustments could be made to reflect differences in health status between the AI/AN population and the U.S. population as a whole.

This could best be done by considering the diseases that are disproportionately high in AI/AN populations. These disparities in health could be weighted to consider the cost of health care. For example, a high rate of suicide may require more mental health services and higher costs for antidepressant medication. Similarly, a high rate of diabetes may require more costly health services for drugs, strips, medical visits, extra dental care and eye care, foot care, nutritionist, patient education, surgery and hospitalization. In calculating the higher health costs, we should exclude such things as nursing home care and dialysis, because the IHS does not pay for these.

In some cases, AI/AN populations are below the national averages. For example, the reported occurrence of many types of cancer are below the national average. It is likely that inadequate levels of funding for the entire Indian health system has led to lower levels of screening and early detection. Therefore, it is suggested that the allocation formulas should not be adjusted downward to accommodate these types of discrepancies in health status.

Currently, the LNF formula includes adjustments for birth rate, death rate and socioeconomic status (SES). The birth rate should be removed because the user population number is already part of the formula. If user population is adjusted annually, it will reflect increased births. Furthermore, the cost of preventing births is minimal. The costs of prenatal care and deliveries are probably included in the actuarial calculations. If not, it is still unnecessary to allocate more money to areas with higher birthrates because a very high percentage of these costs are currently paid by Medicaid programs.

Socioeconomic status is a controversial measure. In general, populations with lower socioeconomic status have worse health status. However, it is not clear whether this premise has been tested in the AI/AN population. Furthermore, at the low end of the income scale, people are more likely to qualify for Medicaid and the costs would not be incurred by the Indian health system. Another consideration is that tribes generally oppose means testing for Indian health services. The inclusion of an SES indicator results in distribution of resources according to needs, which is contrary to the federal trust responsibility.
CHS Formula Considerations

Currently, the CHS formula includes YPLL as a factor. It has already been discussed that YPLL is not a good indicator for distribution of funding. In addition to the reasons already cited, there are other reasons that YPLL should not be used in the CHS formula.

Because YPLL emphasizes deaths at younger ages, it gives greater weight to accidents and violent deaths. One study showed that 30 percent of YPLL is attributed to accidents and violent deaths (Beer et al 1993). Another study that considered YPLL in an American Indian population found that nearly 50 percent of YPLL were attributable to accidents and injuries (Mahoney et al 1989). It is unlikely that 50 percent of the CHS budget in any Service Unit is spent on accidents and injuries. Some types of death in this category that drives YPLL do not have any associated medical costs, such as drowning.

While we were unable to obtain information on expenditures for CHS, it is reasonable to assume that the highest percentage of CHS expenditures are for hospital care. If one looks at the leading causes of hospitalization in IHS and tribally-operated hospitals, injuries and poisoning account for less than 10 percent of discharges (Trends in Indian Health 1997), even though they carry as much as 50 percent of the weight of YPLL.

Accidents and injuries can result in very high medical costs. However, Catastrophic Health Emergency Fund (CHEF) will absorb the costs over $20,700 for a single accident or injury. Thus, the costs of injuries to a CHS program operated by the tribe or Service Unit are limited by CHEF.

By comparison, CHEF rarely absorbs the costs of care for chronic diseases. One study suggests that 80 percent of the cost of treating diabetes is attributed to hospital costs, with the largest proportion related to treatment for cardiovascular disease (Wienberger et al 1990). The American Diabetes Association (1998) estimates that inpatient care comprises 62 percent of the direct medical expenditures to treat diabetes. The total CHS expenditures for an individual with a chronic disease may exceed $20,700 in a year, but the episodes of care are frequent and short, so these expenses incurred by CHS do not qualify for CHEF. As the age at which diabetes is diagnosed becomes younger and complications occur earlier in life, the costs are less likely to be paid by Medicare.

The IHS calculations of YPLL use the age of 65 as the benchmark. Thus, deaths of people older than 65 are not counted in YPLL. We know that the end of life costs to CHS are much greater for those over 65, but they are not even figured into this formula. Furthermore, YPLL does not account for people with chronic diseases like diabetes who incur huge medical costs for many years prior to their deaths after the age of 65.
YPLL should be rejected as health status indicator for use in the CHS formula and other options should be considered that more closely relate to the cost of purchasing services outside the IHS system. Perhaps more than any other part of the Indian health system, CHS corresponds to the medical model. Therefore, the actuarial approach used in the LNF formula lends itself to the CHS distribution formula. Using the LNF formula, the amount allocated for Hospitals and Clinics could be subtracted to determine the level of need for CHS.

Summary

Allocation formulas are used by the IHS after the total appropriation is set by Congress. While measures of cost of illness to society that reflect non-medical costs, like YPLL, may be useful in establishing the overall need and rationale for Congressional appropriations, they are not appropriate for allocation formulas. The distribution of limited resources should correlate with the cost of providing care in a service area. Clearly, factors such as the size of the population served and the cost of living in the geographic region are essential to an allocation formula. The addition of health status indicators to allocation formulas should relate proportionately to the prevalence of diseases that have a higher cost of treatment than the average cost per person served. These adjustments to allocation formulas for health status should be weighted by the estimated cost to the I/T/U to treat the diseases.

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