ACTIVITY/MECHANISMS BUDGET SUMMARY
Department of Health and Human Services
Public Health Service – Indian Health Service
Indian Health Service – 75-0390-0-1-551

INFORMATION TECHNOLOGY AND EPIDEMIOLOGY CENTERS

Program Authorization:
Program authorized by 25 U.S.C. 13, Snyder Act, P.L. 83-568, Transfer Act 42 U.S.C. 2001, and P.L. 102-573, Title II, Section 214.

	FY 1999 Enacted	Fy 2000 Final Appropriation	FY 2001 Estimate	Increase Or Decrease
Budget Authority	$25,750,000	$35,750,000	$42,750,000	$7,000,000

INFORMATION TECHNOLOGY

PURPOSE AND METHOD OF OPERATION

Current I/T/U Information Systems

The Indian Health Service (IHS) information technology infrastructure consists of the integration of several hardware, software, telecommunications and staffing elements. The upgrade of this infrastructure is the first part of a $235 million, multi-year project. This includes improvement to the Resource and Patient Management Systems (RPMS), the national data repository, telecommunications network, financial systems, and interfaces with our federal partners.

The RPMS is a decentralized automated information system consisting of over 60 integrated software applications. The system is designed to operate on micro and mini-computers located at over 400 IHS, tribal, urban Indian health and public health nursing sites/facilities. RPMS software modules fall into three major categories: patient-based administrative applications, patient-based clinical applications, and financial and administrative applications. The patient-based administrative applications include software that performs patient registration, scheduling, billing, and interface functions. The patient-based clinical applications include packages that support the various health care programs including immunization, laboratory, pharmacy, radiology, and diabetes. Thirdly, the financial and administrative applications include application packages that keep track of finances, billing, and equipment inventory/repair. The Division of Information Resources (DIR) develops and tests new software and then distributes the RPMS application suite to IHS Headquarters, each Area Office and other federal partners. Each Area Office releases the RPMS application suite to the appropriate hospitals, clinics, health aid, and State public health nursing sites. Each site may load the full suite of applications or only a subset of the applications (as determined by the size and function of that location. The RPMS applications are highly integrated. This allows the RPMS to store patient data in a core set of centralized files rather than in a number of discipline-specific or program-specific files. This structure allows core data, such as patient visit data, to flow to the necessary software applications without having

the system access multiple files or requiring duplicate data entry. Based on this single database structure, RPMS has a set of IHS/Department of Veterans Affairs (VA) tables that are shared by all applications. Sets of data files are shared by related groups of applications as appropriate.

The IHS Division of Information Resources maintains a centralized data warehouse for patient encounter and administrative data. Through the wide-area network (WAN) each health care facility feeds select information about patient encounters to the national data repository. The national database is used to provide reports for statistical purposes; performance measurement for GPRA and accreditation; public health and epidemiological studies; third party revenue generation; national equipment inventories; and support for development of the IHS budget process.

The IHS telecommunications infrastructure connects IHS, tribal, and urban (I/T/U) facilities together and to the national data repository. This infrastructure is used for data transmission, voice traffic, and Intranet/Internet access. The capacity to support data transmission as well as new telehealth applications varies greatly and the need exists to upgrade the capacity overall.

The IHS currently uses separate systems for billing, materiel management, financial and personnel management. Since these systems are not integrated, actuarial and cost accounting data is not a reality within the IHS for revenue generation, cost containment, work efficiencies and benchmarking comparisons.

For over fifteen years the IHS has had collaboration with the VA in the development of software and sharing of resources. Recently, this federal health care collaboration has included both VA and Department of Defense on the Government Computer Patient Record (GCPR) project. The FY2001 proposed increase would rollout major improvements in hardware, software, telecommunications and support to rural sites. This step of the multi-year plan would also start the upgrade of financial and billing systems.

EPIDEMIOLOGY CENTERS

PURPOSE AND METHOD OF OPERATION

Although acquisition of medical data through development of information systems is critical, just as important is the ability to analyze and interpret the data. Because most medical data are complex, simple reports automatically generated by computer systems cannot answer many questions posed by health professionals and administrators. Trained epidemiologists are needed to complete the system of health information for tribes and communities.

The innovative Tribal Epidemiology Center program was authorized by Congress as a way to provide significant support to multiple tribes in each of the IHS Areas. Beginning in FY 1996, four Centers were funded up to $155,000 each. Since then, these centers have proven that the concept is sound and worthy of additional funding and expansion of the program. Operating from within tribal organizations such as regional health boards, the Epidemiology centers are uniquely positioned to be effective in disease surveillance and control programs, and also in assessing the for effectiveness of public health programs. In addition, they can fill gaps in data needed for GPRA and Healthy People 2010.

Some of the four existing Epidemiology Centers have already developed innovative strategies to monitor the health status of tribes, including development of tribal health registries, and use of sophisticated record linkage computer software to correct existing state data sets for racial misclassification. These data may then be collected by the National Coordinating Center at the IHS Epidemiology Program to provide a more accurate national picture of Indian Health.

Epidemiology Centers provide critically needed support for tribal efforts at self-governance of health programs. Data generated locally and analyzed by Epidemiology Centers enable Tribes to evaluate tribal and community-specific health status data so that planning and decision making can best meet the needs of their tribal membership. Because these data are used at the local level, immediate feedback is provided to the local data systems which will lead to improvements in Indian health data overall. They also can assist tribes in activities such as conducting Behavioral Risk Factor Surveys in order to establish baseline data for successfully evaluating intervention and prevention activities. Epidemiology centers can assist tribes in looking at the cost of health care for Indian people in order to improve the use of resources. In the future, in the expanding environment of tribally-operated health programs, epidemiology centers will ultimately provide additional public health services such as disease control and prevention programs. Some existing centers already provide assistance to tribal-participants in such areas as sexually transmitted disease control and cancer prevention.
A supplemented Program will enhance the ability of the Indian health system to collect and manage data more effectively to better understand and develop the link between public health problems and behavior, socioeconomic conditions, and geography.

The Tribal Epidemiology Program supplementation will also support tribal communities by providing technical training in public health practice and prevention-oriented research and promoting public health career pathways for tribal members.

Efforts to expand the Tribal Epidemiology Program will be coordinated with the Centers for Disease Control and Prevention (CDC) to optimize federal resource utilization, create stronger interagency partnerships, and prevent costly duplication of effort.

Following are the funding levels for the last 2 fiscal years:

Year	Funding
1999	$25,750,000
2000	$35,750,000

RATIONALE FOR BUDGET REQUEST

Total Request -- The request of $42,750,000 is a net increase of $7,000,000 over the FY 2000 Appropriation of $35,750,000. The net increase includes the following:

Information Technology - +$4,000,000
RPMS Upgrades and Interfaces - +$ 2,500,000

Includes software upgrades to the RPMS. In addition to software required to achieve the RPMS growth path, specific emphasis will be placed upon data quality, billing and accounts receivable packages. Increased data set exports would include the Patient Statistical Record, ORYX and GPRA measures. These upgrades would provide the ability to extract clinical and financial data to determine best practices. This includes improved security features that meet all applicable federal laws and regulations regarding patient confidentiality, electronic data transmission, and executive and clinical decision making tools for management engineering, bench marking, and best practice measurement. These investments will pay off with improved I/T/U clinical care, cash flow and work efficiencies.

Telecommunications Infrastructure Improvement - +$400,000

Upgrades to telecommunication infrastructure to meet the needs of both urban and rural healthcare programs dependent upon the transmission of voice, data, or image (e.g., x-rays) between smaller, primary care health facilities and larger referral medical centers. The infrastructure would allow sufficient bandwidth for the potential benefit of advancing telemedicine and teleradiology programs. This includes the addition of 12 telecommunications staff among the Area Offices. Targeted support for hardware, software, and staffing to more effectively utilize available technologies.

Staffing Infrastructure - +$300,000

Provides 24 hour, seven-day-a-week national and area support to I/T/U facilities. Provides information technology staffing patterns at I/T/U facilities comparable to private sector health care facilities. Provides recruitment and compensation program consistent with the private sector.

Customer Training and Succession Planning - +$400,000

Provides significant improvements in RPMS user training through on-site instructor led courses, web-based training and correspondence courses. Provides information technology professional training through national on-site instructor lead courses, Commercial-Off-The-Shelf (COTS) vendor courses and self-paced instruction.

National Data Repository - +$400,000

Upgrade hardware and purchase software to increase the ability to extract demographic, clinical, financial, and epidemiologically significant trends. Provide customers with ability to extract clinical and financial data to determine best practices costing, epidemiological, and demographically significant trends. This initiative combined with the RPMS upgrade and telecommunications improvements will provide data to satisfy the multiple goals of program accountability, improved public health surveillance, and increased third party collections.

Tribal Epidemiology Program Expansion - +$3,000,000

Enhancement of Current Tribal Epidemiology Centers ($1,435,800)

Proposed Funding will support enhanced funding to a base level for four existing Epidemiology Centers and the National Coordinating Center at IHS. Current funding level is approximately $155,000 per. An enhancement of $1,435,800 would enable the existing Epidemiology Centers and the National Coordinating Center to provide additional services/enhance current capabilities such as staffing, travel and training. In addition, Centers will be encouraged to form coalitions representing two or more current IHS

administrative areas in order to provide geographical coverage of the entire country.

- Funding for staff at each Center including, at a minimum, the following:
  - Medical Epidemiologist/Director
  - 2 Staff Epidemiologists (MPH to PhD-level)
  - Statistician/database manager
- Funding to provide each Center with travel funds to cover the entire region
- Funding to provide each Center with appropriate technology and training needed for data analysis, interpretation, and presentation
- Funding for National Coordinating Center to provide agreed upon support as outlined in Cooperative Agreements between IHS and Tribal recipients

Tribal Epidemiology Program Expansion ($1,564,200)

Expansion of the Tribal Epidemiology Program into new regions will (1) provide additional epidemiological expertise at the regional level for more tribes in those regions, and (2) provide additional sources of health data for national use in such activities as GPRA.

Proposed Funding will support:

- Establishment of three additional Epidemiology Centers in regions currently lacking such centers. Centers will be encouraged to form coalitions representing two or more current IHS administrative areas in order to provide geographical coverage of the entire country.