



INDIAN HEALTH SERVICE

TRENDS *in Indian Health*

2000-2001

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Indian Health Service

Office of Public Health

Office of Program Support

Division of Program Statistics

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Preface



Since 1955, the Indian Health Service (IHS) has had the responsibility to uphold the Federal Government's obligation to promote healthy American Indian and Alaska Native people, communities, and cultures and to honor and protect the inherent sovereign rights of Tribes. The IHS mission is to raise the physical, mental, social, and spiritual health status of American Indians and Alaska Natives to the highest level.

Trends in Indian Health presents narrative, tables, and charts describing the IHS program and the health status of American Indians and Alaska Natives. Information pertaining to the IHS structure and American Indian and Alaska Native demography and patient care is also included. Current and trend information are presented, and comparisons to the general population are made when appropriate.

The IHS remains committed to our goal of assuring that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people. The data found in this publication will contribute positively to this health care goal.

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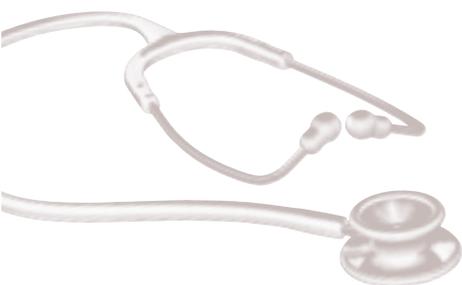
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Overview



The Indian Health Service (IHS), an agency within the Department of Health and Human Services (HHS), is responsible for providing federal health services to American Indian and Alaska Native (AI/AN) people. The provision of health services to federally recognized Indians grew out of a special relationship between the federal government and Indian Tribes. This government-to-government relationship is based on Article I, Section 8, of the United States Constitution, and has been given form and substance by numerous treaties, laws, Supreme Court decisions, and Executive Orders.

The Indian Health program became a primary responsibility of the HHS under P.L. 83-568, the Transfer Act, on August 5, 1954. This Act provides “that all functions, responsibilities, authorities, and duties . . . relating to the maintenance and operation of hospital and health facilities for Indians, and the conservation of Indian health . . . shall be administered by the Surgeon General of the United States Public Health Service.”

The IHS is the federal health care provider and health advocate for AI/AN people and its goal is to assure that comprehensive, culturally-acceptable personal and public health services are available and accessible to AI/AN people. The mission of the IHS, in partnership with AI/AN people, is to raise their physical, mental, social, and spiritual health to the highest level. It is also the responsibility of the IHS to work with the people involved in the health delivery programs so they may be cognizant of entitlements of AI/AN people, as American citizens, to all federal,

state, and local health programs, in addition to IHS and Tribal services. The IHS also acts as the principal federal health advocate for AI/AN people in the building of health coalitions, networks, and partnerships with Tribal nations and other government agencies as well as with non-federal organizations (e.g. academic medical centers and private foundations).

The IHS has carried out its responsibilities through developing and operating a health services delivery system designed to provide a broad-spectrum program of preventive, curative, rehabilitative, and environmental services. This system integrates health services delivered directly through IHS facilities, purchased by IHS through contractual arrangements with providers in the private sector, and delivered through Tribally operated programs and Urban Indian health programs.

The operation of the IHS health services delivery system is managed through local administrative units called service units. A service unit is the basic health organization for a geographic area served by the IHS program, just as a county or city health department is the basic health organization in a State health department.

A few service units cover a number of small reservations; some large reservations are divided into a number of service units. The service units are grouped into larger cultural-demographic-geographic management jurisdictions, which are administered by Area Offices.

Trends in Indian Health



INTRODUCTION

Trends in Indian Health provides basic statistical information to the IHS and its programs, Tribes, other federal and state government agencies, as well as other customers interested in the IHS. This publication uses narrative, charts, and tables to describe the IHS program and the health status of AI/AN people residing in the IHS service area. The IHS service area consists of counties on and near federal Indian reservations. The AI/AN people residing in the service area comprise about 60 percent of all AI/AN people residing in the U.S.

Information pertaining to the IHS organizational structure, AI/AN demography, patient care, and community health are included. Historical trends are depicted, and comparisons to other population groups are made, when appropriate. Current regional differences information can be found in the IHS companion publication called *Regional Differences in Indian Health*.

SCOPE AND ORGANIZATION OF THIS REPORT

Narrative, charts, and tables are grouped into six major categories:

- 1. IHS Structure**
- 2. Population Statistics**
- 3. Natality and Infant/Maternal Mortality Statistics**
- 4. General Mortality Statistics**
- 5. Patient Care Statistics**
- 6. Community Health Statistics**

The tables provide detailed data, while the charts further depict significant relationships. Throughout this report each table and its corresponding chart appear next to each other. However, some self-explanatory charts do not have a corresponding table. In other instances, a table may have more than one chart associated with it.

Summary of Data



Indian Health Service Organizational Structure

The IHS is comprised of 12 regional administrative units called Area Offices. As of October 1, 2001, the Area Offices consisted of 155 basic administrative units called service units. Of the 155 service units, 92 were operated by Tribes.

The IHS operated 36 hospitals, 59 health centers, two school health centers, and 49 health stations. Tribes have two different vehicles for exercising their self-determination—they can choose to take over the operation of an IHS facility through a P.L. 93-638 self-determination contract (Title I) or a P.L. 93-638 self-governance compact, as amended (Title V). A distinction is made in this publication regarding these two Tribal modes of operation, i.e., Title I and Title V. A non-638 contract mechanism is used by Alaska to provide funding to several tribally operated village clinics that are not eligible for Title I funding. Tribes operated

13 hospitals (Title I, 2 hospitals and Title V, 11 hospitals), 172 health centers (Title I, 108 and Title V, 64), 3 school health centers (Title I, 2 and Title V, 1), 84 health stations (Title I, 55 and Title V, 29), and 176 Alaska village clinics (Title I, 9 and Title V, 160, and Non-638, 7).

There were 36 Urban Indian Health Programs ranging from information referral and community health services to comprehensive primary health care services.

As of November 2002, all IHS and Tribally-operated hospitals and eligible IHS-operated health centers were accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Since 1990, 6 of 7 (86 percent) of the Regional Youth Treatment Centers have become accredited by JCAHO or the Commission on Accreditation of Rehabilitation Facilities. The remaining one is preparing for accreditation.

Population Statistics

In Fiscal Year (FY) 2003, the IHS service population (a count of those AI/AN people who are eligible for IHS services) will be approximately 1.59 million. Since 1990, the IHS service population is increasing at a rate of about 1.6 percent per year, excluding the impact of new Tribes.

The AI/AN population residing in the IHS service area is younger than the U.S. all-races population, based on the 1990 Census. For AI/AN, 33 percent of the population was younger than 15 years, and 6 percent was older than 64 years. For the U.S. all-races population, the corresponding values were 22 and 13 percent respectively. The AI/AN median age was 24.2 years compared with 32.9 years for U.S. all-races. The estimated FY 2000 population was more than 669,000 AI/AN residing in the Urban Indian Health Programs service area.

According to the 1990 Census, AI/AN have lower incomes than the general population. In 1989, AI/AN people residing in the current Reservation States had a median household income of \$19,897 compared with \$30,056 for the U.S. all-races population. During this time period, 31.6 percent of AI/AN people lived below the poverty level in contrast to 13.1 percent for the U.S. all-races population.

Nativity and Infant/Maternal Mortality Statistics

The birth rate for AI/AN people residing in the IHS service area was 24.0 (rate per 1,000 population) in 1996-1998. It is 1.7 times the 1997 birth rate of 14.5 for the U.S. all-races population.

The maternal mortality rate for AI/AN people residing in the IHS service area dropped from 27.7 (rate per 100,000 live births) in 1972-1974 to 6.8 in 1996-1998, a decrease of 75 percent. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates. In 1996-1998, there were 7 maternal deaths, unadjusted and adjusted.

The infant mortality rate for AI/AN people residing in the IHS service area dropped from 25.0 (rate per 1,000 live births) in 1972-1974 to 8.9 in 1996-1998, a decrease of 64 percent. These rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates. The 1996-1998 rate is 24 percent higher than the U.S. all-races rate of 7.2 for 1997.

General Mortality Statistics

The leading cause of death for AI/AN people residing in the IHS service area (1996-1998) was diseases of the heart followed by malignant neoplasms (the same as for the total U.S. all-races population in 1997). However, the cause of death rankings differ by sex. For AI/AN males, the top two causes were diseases of the heart and unintentional injuries. For AI/AN females, the top two causes were diseases of the heart and malignant neoplasms.

In 1996-1998, the AI/AN (IHS service area) age-adjusted death rates for the following causes were considerably higher than those for the U.S. all-races population in 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates. The following list is a comparison of AI/AN age-adjusted rate (using data that are also adjusted for misreporting of AI/AN race on the state death certificates) to the U.S. rate where there are substantial differences.

Comparison of 1996-1998 AI/AN death rates to 1997 U.S. all-races death rates.

1. alcoholism —
638 percent greater
2. tuberculosis —
400 percent greater
3. diabetes mellitus —
291 percent greater
4. unintentional injuries —
215 percent greater
5. suicide —
91 percent greater
6. homicide —
81 percent greater
7. pneumonia and influenza —
67 percent greater
8. firearm injury —
44 percent greater
9. gastrointestinal disease —
38 percent greater
10. diseases of the heart —
20 percent greater
11. cerebrovascular diseases —
14 percent greater
12. Malignant neoplasms —
1 percent less
13. human immunodeficiency virus (HIV) disease —
43 percent less

Patient Care Statistics

In FY 2001, there were about 81,000 admissions to IHS and Tribal direct and contract general hospitals. The leading cause of hospitalization was obstetric deliveries and complications of pregnancy and puerperium.

The total number of ambulatory medical visits (IHS and Tribal direct and contract facilities) was more than eight million in FY 2001, an increase of more than 1,600 percent since FY 1955. The leading cause of ambulatory medical visits in IHS and Tribal direct and contract facilities was supplementary classification conditions. The supplementary classification category includes such clinical impressions as other preventive health services, well child care, physical examination, tests only (lab, x-ray, screening), and hospital, medical, or surgical followup.

The number of direct and contract dental services provided (IHS, Tribal, and Urban), as reported to the IHS central database, increased almost 15 fold (from under 0.2 million in FY 1955 to about 2.7 million in FY 2001).

Community Health Statistics

For people accepted for treatment into the IHS substance abuse treatment program, most initial contacts are for alcohol addiction only. However, the number of initial contacts involving other drugs has been increasing. Also, the age-adjusted drug-related death rate for AI/AN residing in the IHS service area increased from 3.9 deaths per 100,000 population in 1979-1981 to 10.3 in 1996-1998. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates. The 1996-1998 rate is 1.8 times greater than the U.S. all-races rate of 5.6 for 1997.

The IHS Injury Prevention (IP) program has a wide variety of projects in place in all IHS Areas to address this major health problem. Exemplary projects are: child passenger protection, roadway/roadside hazard identification, safety belt use promotion, deterring drinking and driving, drowning prevention, smoke detector usage, helmet use, and injury prevention campaign. The IHS IP program has contributed to a 36 percent decline in IHS and Tribal direct and contract hospitalizations for injuries and poisonings since FY 1987.

There were more than 379,540 public health nursing visits recorded in the Headquarters reports for FY 2001. Most visits dealt with health promotion/disease prevention (34 percent of the visits), morbidity (19 percent), and school and maternal health (6 percent). The visits were concentrated in two age groups, children under 5 years of age (17 percent) and adults over the age of 64 (20 percent). Female visits outnumbered male visits by 62 percent.

The community health representative (CHR) program reported nearly 2.3 million client contacts in FY 1998. Most of these contacts took place in the community (34 percent). The two leading detailed activities for CHR contacts in FY 1998 were case management (22 percent) and health education (20 percent). The reduction of reported CHR services in FY 1998 (from 4.1 million in FY 1993) reflects the transfer of resources to Tribes as part of the Self-Governance activity. Most Self-Governance Tribes elected not to use the national CHR program reporting system. Due to cost and monitoring factors, CHR PCC system was terminated in 2001, therefore charts and tables for CHR have not been changed since the last production of *Trends in Indian Health 1998-1999*.

Since 1960, IHS has funded the provision of sanitation facilities for more than 241,000 Indian homes. These services included water and sewerage facilities, solid waste disposal systems and technical assistance to establish and equip operation and maintenance organizations for new, rehabilitated, and existing homes. Contributions to IHS sanitation facilities projects are received from numerous sources. In FY 2000, the largest source of funds (55 percent of the total) was attributable to Tribes. State governments contributed 30 percent and the Department of Housing and Urban Development (HUD) Infrastructure provided 4 percent of the funds for these cooperative projects.

The FY 2001 sanitation deficiencies to serve existing AI/AN homes and communities totals \$831 million. This amount is to provide first service sanitation facilities, to upgrade existing facilities, to provide solid waste facilities, and to provide assistance to operation and maintenance organizations.

Sources and Limitations of Data



Population Statistics

The IHS service population consists of AI/AN identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Census Bureau county data. The Census Bureau enumerates those individuals who identify themselves as being American Indian, Eskimo or Aleut. The IHS service population is estimated by counting those American Indians, Eskimos, and Aleuts (as identified during the Census) who reside in the geographic areas in which IHS has responsibilities (“on or near” reservations, i.e., contract health service delivery areas [CHSDAs]). The IHS service population comprises approximately 60 percent of all AI/AN residing in the U.S. These people may or may not use IHS services.

The IHS service population estimates, which are shown in this publication, need to be contrasted to the IHS user population estimates that are shown in the *Regional Differences in Indian Health* publication. IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered AI/AN patients that had at least one direct or contract inpatient stay, ambulatory medical visit, or dental visit during the last three years are defined as users. IHS user population figures are used for calculating IHS patient care rates. In contrast, IHS service population figures are used in calculating AI/AN vital event rates since state birth and death certificates do not provide information on use of IHS services.

IHS service populations between census years (e.g., 1980 and 1990) are estimated by a smoothing technique in order to show a gradual transition between census years. This normally results in upward revisions to service population figures projected prior to a census, since each census tends to do a better job in enumerating AI/AN. For example, the AI/AN service population enumerated in 1990 was approximately 8 percent higher than that estimated by IHS for 1989. Therefore, after release of the 1990 enumeration figures, IHS smoothed the service population estimates for 1981-1989. That set of smoothed populations was used in the 1992 edition of this series. Subsequently, the Census Bureau issued revised 1990 census AI/AN population counts by age and sex for all U.S. counties. They resulted in a 3.9 percent increase for the 1990 IHS service population using these “new” 1990 census counts compared to the “old” 1990 census counts. In order to adjust for this 1990 increase, IHS again smoothed the service populations for 1981-1989. This second set of smoothed populations was used in the 1993 edition of the series. The Census Bureau then issued revised 1980 census AI/AN population counts by age and sex for all U.S. counties, as was done for 1990. They resulted in a 2.8 percent increase for the 1980 IHS service

population using these “new” 1980 census counts compared with the “old” 1980 census counts. In order to adjust for this 1980 increase, IHS for a third time smoothed the service populations for 1981-1989. This third set of smoothed populations was used for the first time in the 1994 edition of the series.

IHS service populations beyond the latest census year (1990) are projected through linear regression techniques, using the most current ten years of AI/AN birth and death data provided by the National Center for Health Statistics (NCHS). The natural change (estimated number of births minus estimated number of deaths) is applied to the latest census enumeration.

The IHS does not currently forecast changes in the service population distribution by age and sex. Rather, appropriate AI/AN age and sex distributions from census years are applied to population estimates for non-census years.

The social and economic data contained in this publication are from the 1990 census. They reflect the characteristics of persons that self-identified as American Indian, Eskimo or Aleut during the census.

Vital Event Statistics

AI/AN vital event statistics are derived from data provided annually to the IHS by NCHS. Vital event statistics for the U.S. population were derived from data reported in various NCHS publications, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the state health departments, based on information reported on official state birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.

The natality and mortality data are only as accurate as the reporting by the states to NCHS.¹ NCHS does perform numerous edit checks, applies verification methods, and imputes values for non-responses.

Misreporting of Race on State Death Certificates

Misreporting of AI/AN race on state death certificates occurs, especially in areas distant from traditional AI/AN reservations.² In order to determine the degree and scope of the misreporting, IHS conducted a study utilizing the National Death Index (NDI) maintained by the NCHS. The study involved matching IHS patient records of those patients who could have died during 1986 through 1988 with all death records of U.S. residents for 1986 through 1988 as contained on the NDI. The study revealed that on 10.9 percent of the matched IHS-NDI records, the race reported for the decedent was other than AI/AN. The percentage of records with inconsistent classification of race ranged from 1.2 percent in the Navajo Area to 28.0 and 30.4 percent in the Oklahoma and California Areas, respectively.

The results of the NDI study provide sufficient numbers to calculate adjustments for each IHS Area, IHS overall, and selected age groups. In addition to these adjustments based on the study findings, IHS assumed the following; a) the results from 1986-88 apply to other years, b) IHS age-group adjustments applied also to each Area, and c) the Area adjustments applied to the causes of death used in this publication (i.e. if an

Area's total deaths needed to be increased by ten percent, than the deaths for each cause of death would also increase by this same rate). These assumptions cannot be statistically supported by the results of the study. However, it was necessary to adjust all of the death rates in this publication to provide a meaningful and comprehensive look at health status.

These NDI adjustments were used for the first time in the 1997 edition of this publication. Both unadjusted and adjusted information is shown, as applicable. The adjustments were applied to the results obtained from using an unadjusted death file. In the 1997 edition, only the latest three years (1992-94 at that time) of death data were adjusted based on the study findings. Starting with this edition, the adjustments are extended to data years 1972 through 1998.

IHS has more specific adjustment factors for the age group under 1 year. These are derived from the linked birth/infant death data sets produced by the NCHS. IHS now has sufficient years of this data set (1983-91 and 1995-96) to calculate adjusted infant mortality rates. In this edition (as was done for the first time in the 1997 edition with 1992-94 data), unadjusted and adjusted infant mortality rates

will be shown for data years 1987 through 1998. It is reasonably assumed that data years for which linked data sets were not produced (NCHS did not produce linked data sets prior to data year 1983 and for data years 1992-94) may be adjusted based on the results from other linked data sets. These adjustments based on the linked data sets take precedent over the NDI adjustments for the under one year age group, described above.

The AI/AN vital event statistics in this publication pertain to only AI/AN people residing in the IHS service area. Editions of this publication before 1992 showed vital event statistics calculated on a Reservation State basis. Therefore, data were included for AI/AN residing outside the geographic areas for which IHS has responsibility. This was done in order to show trends starting in FY 1955, to correspond with the inception of the IHS program. Prior to 1972, only total Reservation State data are available.

Now that there are sufficient vital event data available for the IHS service area to show meaningful trends, this publication shows vital event statistics for the IHS service population, starting with data for calendar year 1972. IHS service area data are more indicative of the health status of the AI/AN that IHS serves. Reservation State vital

event rates tend to be lower in value (i.e., lower birth rates, lower death rates) than IHS service area rates. However, the vital event tables in this publication will still include the 1955 Reservation State figure as an historical bench mark.

The AI/AN population is considerably younger than the U.S. all-races population. Therefore, the death rates presented in this publication have been age-adjusted, where applicable, so that appropriate comparisons can be made between these population groups. Two exceptions are the information presented for leading causes of death and leading cancer sites. In order to determine the leading causes of death or cancer sites for a population group, it is necessary to rank without any adjustment for age. However, it should be kept in mind that the ranking of causes of death or cancer sites for a population group is affected by its age composition.

Beginning with the 1996 edition, the leading causes of death are shown for more detailed age groups in support of the IHS Director's initiatives on youth and elder care. In particular, the 1 to 14 year age group has been split into 1 to 4 and 5 to 14, and the 45 to 64 year age group has been split into 45 to 54 and 55 to 64.

Age-Adjustment

The age-adjusted death rates presented in this publication were computed by the direct method, that is, by applying the age-specific death rate for a given cause of death to the standard population distributed by age. The total population as enumerated in 1940 was selected as the standard since this is the standard used by NCHS. The rates for the total population and for each race-sex group were adjusted separately, by using the same standard population. The age-adjusted rates were based on ten-year age groups. It is important not to compare age-adjusted death rates with crude rates.

ICD-9-Codes

Prior to the 1993 edition of this publication, alcoholism deaths were defined through the use of three ICD-9 cause of death code groups; 291—alcoholic psychoses; 303—alcohol dependence syndrome and; 571.0-571.3—alcoholic liver disease. Various IHS Area statisticians and epidemiologists believed this definition to be incomplete and suggested that it be expanded to include five additional ICD-9 code categories. These additional categories were used for the first time in the 1993 edition. They include; 305.0—alcohol overdose;

425.5—alcoholic cardiomyopathy; 535.3—alcoholic gastritis; 790.3—elevated blood-alcohol level; and E860.0, E860.1—accidental poisoning by alcohol, not elsewhere classified. This expanded definition results in about a 25 percent increase in the number of alcoholism deaths identified in comparison to the previous three-group definition. NCHS is now publishing alcoholism deaths with a definition that includes codes that IHS had not used, i.e., 357.5—alcoholic polyneuropathy and all of E860 (not just E860.0 and E860.1)—accidental poisoning by alcohol. To be consistent with NCHS, these additional codes are now used by IHS starting with the 1996 edition. The NCHS definition includes all of the code groups previously used by IHS plus these new codes. The NCHS definition of alcoholism deaths is now used in all IHS publications, including *Regional Differences in Indian Health*.

NCHS is also now publishing drug-related deaths with a definition that includes codes that IHS had not used, i.e., 292—drug psychoses and E962.0—assaults from poisoning by drugs and medicaments. To be consistent with NCHS, this additional code was used by IHS for the first time in the 1996 edition. The NCHS

definition includes all of the code groups previously used by IHS plus these two codes. This NCHS definition of drug-related deaths is now used in all IHS publications, including *Regional Differences in Indian Health*.

Injury and poisoning deaths are shown for various sub-groups in this publication, e.g., accidents, homicides, suicides. A new grouping, “injury by firearms,” was added starting with the 1996 edition because of its significance in the AI/AN community. It includes deaths with the following ICD-9 codes; E922—accident caused by firearm missile; E955.0-E955.4—suicide and self-inflicted injury by firearms; E965.0-E965.4 and E970—assault by firearms and legal intervention; E985.0-E985.4—injury by firearms, undetermined whether accidentally or purposely inflicted. Injury by firearm causes exclude explosives and other causes indirectly related to firearms.

Patient Care Statistics

Patient care statistics are derived from IHS reporting systems. There are four main patient care reporting systems. The Monthly Inpatient Services Report is a patient census report that is prepared by each IHS hospital. It indicates the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), and is used for the direct inpatient workload statistics. The Inpatient Care System is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.). The data are collected daily, one record per discharge. The Contract Care System is the source of similar contract hospital inpatient data.

The Ambulatory Patient Care System is the source of data pertaining to the number of ambulatory medical visits at IHS facilities by various patient characteristics (age, sex, clinical impression, community of residence, etc.). The data are collected daily, one record per ambulatory medical visit. The Contract Care System is the source of similar contract ambulatory medical visit data.

The data from the automated systems are subject to recording, inputting, and transmitting errors. However, the

IHS Division of Program Statistics monitors the reporting systems, and each one has a computer edit. In these ways, errors are kept to an acceptable level.

Starting with the 1996 edition, leading causes of hospitalization and ambulatory medical visits are shown for specific age groups. In prior editions, they were only shown for all ages and by sex.

There are seven other information systems that provide data, presented in this report, pertaining to patient care. The Clinical Laboratory Workload Reporting System is the source of laboratory services data. The Pharmacy System is the source of pharmacy workload data. The Contract Information System and Grants Data System are the sources for Tribal health contract and grant awards information. The Urban Projects Reporting System is the source for workload data for the Urban Projects. The Dental Data System is the source for dental services data. The Fluoridation Data System, managed by the IHS Dental Services Team, is the source for fluoridation systems information. The Pharmacy System and Urban Projects Reporting System are manual systems, the others are automated. The systems are monitored by IHS Headquarters personnel.

Community Health Statistics

The source of alcoholism and substance abuse program data is the Chemical Dependency Management Information System (CDMIS). This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel.

The public health nursing data are collected through the IHS Community Health Activity Reporting System. This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel.

Data on the IHS Community Health Representatives (CHR) Program previously obtained from the IHS Community Health Representative Information System (CHRIS II). CHRIS II was an automated reporting system monitored by IHS CHR Program Headquarters personnel.

IHS Headquarters, in response to increased Tribal self-governance activities electing not to use the national CHR Program reporting system, decided to encourage tribal CHR Program reporting by developing and implementing a more user-friendly electronic format. The new system, titled the CHR Patient Care Component (CHR PCC) was based on the IHS Resources and Patient Management System (RPMS).

On April 1, 2000, the CHR PCC became the new reporting system for the CHR Program nationwide. It was to provide

a direct link or a remote link to the IHS RPMS. In addition, a web-based reporting system was also available, but these were never fully tested and were short-lived. Due to cost and monitoring factors, the contract supporting the CHR PCC system was terminated in 2001. Additionally, the position of national CHR Director remained vacant for more than eighteen months, compounding issues with data collection efforts. As a result, charts and tables herein have not been updated but will be by the next publication date.

The sanitation facilities statistics are derived from IHS reporting systems and financial systems. The IHS reporting systems are the Project Data System and the Sanitation Deficiency System. The Project Data System is the source of detailed data on P.L. 86-121 construction projects that provide water supplies and sewerage and waste disposal facilities to AI/AN. It includes such data as community name, type and number of homes provided with services, the funds allocated and funds expended, completion dates, and accomplishments. Data are collected quarterly. The Sanitation Deficiency System is the source of additional data on sanitation facilities serving AI/AN. It includes such data as the number of homes served, water rates, fluoridation information, Safe Drinking Water Act Compliance, system reliability, and the unmet need for new or upgraded facilities. Data are collected annually. The systems are monitored by IHS Headquarters personnel.

Glossary

Age-Adjustment (direct method) —

The application of age-specific rates in a population of interest to a standardized age distribution in order to eliminate differences in observed rates that result from age differences in population composition. This adjustment is usually done when comparing two or more populations at one point in time or one population at two or more points in time.³

Area — A defined geographic region for Indian Health Service (IHS) administrative purposes. Each Area Office administers several service units

Average Daily Patient Load — The average number of patients occupying beds in a hospital on a daily basis. It is calculated by dividing total inpatient days for the year by 365.

Birthweight — Weight of fetus or infant at time of delivery (recorded in pounds and ounces, or grams).

Cause of Death — For the purpose of national mortality statistics, every death is attributed to one underlying

condition, based on information reported on the death certificate and using the international rules for selecting the underlying cause of death from the conditions stated on the death certificate. The underlying cause is defined by the World Health Organization (WHO) as the disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence, which produced the fatal injury. Generally, more medical information is reported on death certificates than is directly reflected in the underlying cause of death. The conditions that are not selected as underlying cause of death constitute the non-underlying cause of death, also known as multiple cause of death. Cause of death is coded according to the appropriate revision of the International Classification of Diseases (ICD). Effective with deaths occurring in 1999, the United States began using the Tenth Revision of the ICD (ICD-10); during the period 1979-98, causes of death were coded and classified according to the Ninth Revision (ICD-9). Each of these

revisions has produced discontinuities in cause-of-death trends. These discontinuities are measured using comparability ratios.⁴

Contract Care — Services not available directly from IHS or Tribes that are purchased under contract from community hospitals and practitioners.

Health Center — A facility, physically separated from a hospital, with a full range of ambulatory services including at least primary care physicians, nursing, pharmacy, laboratory, and x-ray, which are available at least forty hours a week for ambulatory care.

Health Station — A facility, physically separated from a hospital or health center where primary care physician services are available on a regularly scheduled basis but for less than forty hours a week.

High Birthweight — Birthweight of 4,000 grams or more.

Infant Mortality — The death of a live-born child before his or her first birthday. Deaths in the first year of life may be further classified according to age as neonatal and postneonatal. Neonatal deaths are those that occur before the 28th day of life; postneonatal deaths are those that occur between 28 and 365 days of age.

Infant Mortality Rate — A rate based on period files calculated by dividing the number of infant deaths during a calendar year by the number of live births reported in the same year. It is expressed as the number of infant deaths per 1,000 live births.⁵

Life Expectancy — Life expectancy is the average number of years of life remaining to a person at a particular age and is based on a given set of age-specific death rates, generally the mortality conditions existing in the period mentioned. Life expectancy may be determined by race, sex, or other characteristics using age-specific death rates for the population with that characteristic.⁶

Live Birth — In the WHO's definition, also adopted by the United Nations and the NCHS, a live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life such as heartbeat, umbilical cord pulsation, or definite movement of voluntary muscles, whether the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.⁷

Low Birthweight — Birthweight of less than 2,500 grams.

Maternal Death — The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy. Maternal death is one for which the certifying physician has designated a maternal condition as the underlying cause of death. Maternal conditions are those assigned to Complications of Pregnancy, Childbirth, and the Puerperium, ICD-9 codes 630-676 (ICD-10 codes O00-O99).⁸

Neonatal Mortality Rate — The number of deaths under 28 days of age per 1,000 live births.

Occurrence — Place where the event occurred.

Postneonatal Mortality Rate — The number of deaths that occur from 28 days to 365 days after birth per 1,000 live births.

Race — In 1977 the Office of Management and Budget (OMB) issued Race and Ethnic Standards for Federal Statistics and Administrative reporting in order to promote comparability of data among Federal data systems. The standards called for the Federal Government's data

systems to classify individuals into the following four racial groups:

- American Indian or Alaska Native
- Asian or Pacific Islander
- Black
- White

Depending on the data source, the classification by race was based on self-classification or on observation by an interviewer or other person filling out the questionnaire.

In 1997 new standards were announced for classification of individuals by race within the Federal Government's data systems. The latest standards have five racial groups:

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or other Pacific Islander
- White

These five categories are the minimum set for data on race for Federal statistics. The 1997 standards also offer an opportunity for respondents to select more than one of the five groups, leading to many possible multiple race categories. As with the single race groups, data for the multiple race groups are to be reported when estimates meet agency requirements for reliability and con-

fidentiality. The 1997 standards allow for observer or proxy identification of race but clearly state a preference for self-classification. The Federal government considers race and Hispanic origin to be two separate and distinct concepts, therefore Hispanics may be of any race. Federal data systems are required to comply with the 1997 Standards by 2003.⁹

On the death certificate, race is usually recorded by the funeral director who may or may not query the family members of the decedent. The race of a newborn does not appear on the birth certificate. To determine race on the birth certificate, if either the mother, or the father, or both parents were recorded as AI/AN on the birth certificate, the birth is considered as an AI/AN birth.

Reservation State—A state in which IHS has responsibilities for providing health care to American Indians or Alaska Natives.

Residence—Usual place of residence of person to whom an event occurred. For births and deaths, residence is defined as the mother's place of residence.

Service Area—The geographic areas in which IHS has responsibilities —“on or near” reservations, i.e., contract health service delivery areas.

Service Population — AI/AN people identified to be eligible for IHS services.

Service Unit — The local administrative unit of IHS.

User Population — AI/AN people who have used services funded by the IHS at least once during the last three-year period.

Years of Potential Life Lost (YPLL) — A mortality indicator that measures the burden of premature deaths, calculated by subtracting the age at death from age 65 and summing the result over all deaths.

Sources of Copies and Additional Information

Additional AI/AN health status information can be obtained from the IHS Division of Program Statistics. Specific responsibilities are as follows:

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Copies of this and other statistical publications may be obtained from Kateri L. Gachupin, Secretary at:

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This publication, other IHS statistical publications, and links to IHS data files are available on the Division of Program Statistics Web Site at:

http://www.ihs.gov/NonMedicalPrograms/IHS_Stats/