Appendix C.—Major Population-Based Health Care Surveys

Introduction

The need to monitor health care costs and expenditures, utilization of services, and health status of the population is heightened by the changes in Medicare's prospective payment system (PPS). This appendix describes the major Federal and private population-based health surveys that are available for this purpose. The surveys described in this appendix are of two general types:

- surveys of the general population, and
- surveys of special populations.

Surveys of patients in long-term care institutions are also included, but surveys conducted only in years prior to 1977 are not. Information is provided on sample design (e.g., probability sample), type of population surveyed, and size of sample. If the sampling involved more extensive methods than a probability sample of the general population, then more detailed information about the sample design is included.

The primary sponsor of the Federal surveys has been the National Center for Health Statistics (NCHS), although other agencies such as the Bureau of the Census have played an essential role in the design and conduct of the surveys. Certain studies planned for the future will be cosponsored by various Federal health agencies and will draw on the information and expertise obtained in the past.

In the private sector, the American Hospital Association (AHA) conducts surveys of public opinion on health issues. The Center for Health Administration Studies (CHAS) at the University of Chicago has been important in conducting household surveys pertaining to access to medical care. This appendix summarizes private surveys, but it does not include every private survey conducted.

Federal Health Surveys

Table C-1 summarizes some salient characteristics of Federal population-based health surveys, including their sponsoring agencies, the frequency with which they are conducted, survey dates, and their availability, Table C-2 summarizes data elements of each survey. Data tapes for all the Federal surveys described below are available for purchase by the public.

Federal Surveys of the General Population

Health Interview Survey (HIS) .—HIS, initiated by NCHS in 1957, has been conducted annually through 1984. This survey is designed to collect information on the social, economic, and demographic characteristics of sampled individuals, as well as on their health status and utilization of medical services.

HIS data are obtained from an annual sample of the noninstitutionalized population of the United States. Continuous sampling of the population is used for HIS, and each week a sample of the target population is interviewed. In 1981, 41,000 households containing approximately 110,000 persons were sampled.

From each person interviewed, HIS collects data on the following categories (352):

- social, economic, and demographic characteristics;
- illness and injury recall;
- description of health conditions and related disabilities;
- limitation of activity;
- hospitalization;
- accidents resulting in injury;
- physician visits; and
- limitation of mobility.

The health items in HIS are defined in terms of the impact they have on the lives of individuals rather than on medical criteria. Periodically, usually every 2 to 5 years, HIS has collected data on health-related items other than those listed above. These "rotating items" include measures such as mobility limitation, dental care, and insurance coverage.

Also, most questionnaires have included one or more special supplements. These supplements have usually been planned for a l-year collection period, but some have been included periodically according to a planned schedule. Others, originally intended as one-time items, became rotating supplements when their timeliness and importance indicated a need for trend data. Examples of the rotating supplements are health insurance coverage, hearing impairment, loss of income, nursing care/special aids, personal health expenses, prescribed and nonprescribed medicines, smoking habits, vision impairment and use of corrective lenses, and X-ray visits. The combination of rotating items and supplements provides greater coverage of information and allows HIS to respond to changing needs (352). HIS data are available in the form of standardized microdata tapes, and special tabulations can also be obtained for public use from NCHS. The latest data available are from 1981.

Health and Nutrition Examination Survey (HANES).–HANES is a modification and expansion of the Health Examination Survey (HES) and has been conducted two times by NCHS since 1971.

Table C-1.—Major Federal Population-Based Health Care Surveys

Survey	Sponsoring agency	Frequency	Survey year	Next expected survey	Time lag	cost
Surveys of the general/ population:						
Health Interview Survey (HIS)	NCHS	Annual	**1969-84**	1985	1-2 yrs.	$425/tape
Health and Nutrition Examination Survey (HAN ES)	NCHS	Cyclical (5 yrs.)	1971-75, 1976-80	1988	1-2 yrs.	$125 -$305/tape
National Medical Care Expenditure Survey (N MCES)	NCHSR	One time	1977	1987	NA[a]	To be determined
National Medical Care Utilization and Expenditure Survey (NMCUES)	NCHS, HCFA	One time	**1980**	**1987**	3 yrs.	To be determined
National Survey of Personal Health Practices and Consequences (NSPHPC)	NCHS	Twice	1979, 1980	—	1-2 yrs.	$125/tape
Survey of Disability and Work (SDW)	SSA	One time	1978	1988	1 yr.	$255/tape
Surveys of special populations:						
Hospital Discharge Survey (HDS)	NCHS	Annual	1965-84	1985	1-2 yrs.	$125/tape
National Ambulatory Medical Care Survey (NAMCS)	NCHS	Annual	1973-81	1985	1-2 yrs.	$125/tape
National Long-Term Care Survey (N LTCS)	ASPE, HCFA	Twice	1982, 1984	—	2 yrs.	To be determined
National Nursing Home Survey (NNHS)	NCHS	Irregular	1969, 1973, 1974, 1977	1985	2 yrs.	$185-$305/tape
Survey of Institutionalized Persons (SIP)	ASPE	One time	1976	—	2 yrs.	NA

ABBREVIATIONS ASPE = Assistant Secretary for Planning and Evaluation
HCFA = Health Care Financing Administration
NCHS = National Center for Health Statistics
NCHSR = National Center for Health Services Research
SSA = Social Security Administration

[a] NA - Not available

SOURCES R Mullner, An Inventory of U S Health Care Data Bases, " A Review *of Public Data Use 11(2) 85.192,* June 1983, and L A Aday, R Anderson and G V Fleming *Health Care in "the U S Equitable for Whom?* (Beverly Hills, CA" Sage Publications, Inc , 1980)

Through direct physical examination and clinical tests, HANES gathers data on such measures as the prevalence of medically defined illnesses, population distributions of blood pressure, visual acuity, serum cholesterol levels, etc. Medical history, demographic, and socioeconomic data are also collected. HANES also collects nutritional status information, which is used for monitoring changes over time (319).

HANES I, which began in 1971 and ended in 1974, consisted of a detailed health examination given to persons 25 to 74 years of age; the nutrition component of HANES I was directed to individuals from 1 to 74 years of age. HANES II, which began in 1976 and ended in 1980, collected nutrition and health status information from individuals aged 6 months to 74 years. These data will be used as a way of monitoring changes in nutritional status. Besides a medical history questionnaire, HANES II used two dietary questionnaires (including a food frequency interview), medications and vitamin usage, dietary supplement interview, and a behavior questionnaire. Physical examinations were conducted, as well as special clinical procedures, X-rays, urine and blood samples. Both HANES I and II had sample sizes of approximately 21,000 examined individuals. HANES III is being planned for 1987 (356).

National Medical Care Expenditure Survey (NMCES).—NMCES was conducted by the National Center for Health Services Research (NCHSR) in 1977-78. This survey was designed to assess the costs of health care, the utilization of services, and the costs of illness for

Table C.2.— Data Items Represented in Major Federal Population-Based Health Care Surveys

	Surveys of the general population						Surveys of special populations				
Survey characteristics	HIS	HANES[b]	NMCES	NMCUES	NSPHPC	SDW	NAMCS	HDS	NNHS	NLTCS	SIP
Health care costs:											
Hospital		X	X	X	X				X		
Physician		X	X	X					X		
Long-term care			X	X				X	X	X	
Other health care costs			X	X					X		
Source of payment			X	X					X	X	X
Utilization of services:											
Hospitalization	X	X	X	X	X			X	X		
Outpatient or emergency	X			X					X		
Physician visits	X	X	X	X	X			X	X		X
Diagnostic services			X	X	X			X	X		
Medication therapy		X	X	X					X		X
Long-term care				X						X	
Discharge summary				X			X				
Health status:											
Age/sex	X	X	X	X	X	X	X	X	X	X	X
Description of conditions (principal diagnosis)	X	X	X	X	X	X	X	X	X	X	X
Medical history	X	X	X								
General well-being (self-perceived health status)	X	X	X		X						
Limitation of activity/function	X			X		X			X	X	X
Access to care	X		X								

ABBREVIATIONS HANES = Health and Nutrition Examination Survey
HOS = Hospital Discharge Survey
HIS = Health Interview Survey
NAMCS = National Ambulatory Medical Care Survey
NLTCS = National Long-Term Care Survey
NMCES = National Medical Care Expenditure Survey
NMCUES = National Medical Care Utilzation and Expenditure Survey
NNHS = National Nursing Home Survey
NSPHPC = National Survey of Personal Health Practices and Consequences
SOW = Survey of Disability and Work
SIP = Survey of Institutionalized Persons

SOURCES HIS, U S Department of Health and Human Services Public Health Service National Center for Health Statistics Current *Estimates Health Interview Survey* DHHS Pub. No (PHS) 80.1551 (Washington DC U S Government Printing Off Ice November 1979)

HANES: U S Department of Health Education and Welfare Public Health Service National Center for Health Statistics *Plan and Operation of HANES* 1 *Augmentation* DHHS Pub No (PHS) 78-1314 (Washington DC U S Government Printing Office June 1978)

NMCES: U S Department of Health and Human Services Public Health Service National Center for Health Statistics *NMCES Household Interview Instruments* DHHS Pub No (PHS) 81-3280 (Washington DC U S Government Printing Off Ice April 1981)

NMCUES: U S Department of Health and Human Services Public Health Service National Center for Health Statistics *Procedures and Questionnaires of the National Medical Care Utilization and Expend/lure Survey* DHHS Pub No 83-20001 (Washington DC U S Government Printing Off Ice March 1983)

NSPHPC: U S Department of Health and Human Services National Center for Health Statistics *Highlights* From *Wave 1 of the National Survey of Persona/ Health Practices and Consequences U S 1979* DHHS Pub No (PHS) 81-1162 (Washington DC U S Government Printing Off Ice June 1981)

SOW: U S Department of Health and Human Services Social Security Administration *1978* Survey *of Disability and Work* Pub No 13-11745 (Washington OC U S Government Printing Office January 19821

NAMCS: U S Department of Health and Human Services Public Health Service National Center for Health Statistics *Public Use Data Tape Documentation National Ambulatory Medical Care Survey* (Washington DC U S Government Printing Off Ice April 1981)

HDS: U S Department of Health Education and Welfare Public Health Service National Center for Health Statistics *Development of the Design of the NCHS Hospital Discharge Survey* (Washington DC U S Government Printing Office September 1970)

NNHS: U S Department of Health and Human Services Public Health Service National Center for Health Statistics *Nursing and Related Care Homes* DHHS Pub No (PHS) 84.1824 (Washington OC U S Government Printing Office December 1983)

NLTCS: U S Department of Commerce Bureau of Census Long Term Care Survey OMB Pub No 0990-0077 Form LTC-3 (Washington DC U S Government Printing Off Ice April 1982)

SIP. U S Department of Commerce Bureau of Census 1976 *Survey of Institutionalized Persons Methods and Procedures* (Washington DC U S Government Printing Off Ice June 1978) different diagnostic categories. The effects of Medicare and Medicaid on use and costs of personal health care was also a focus of the survey.

The primary source of information for NMCES was a household survey. Eligible persons in sampled households were questioned about the use of health services, expenditures, and insurance coverage. Approximately 13,500 households were interviewed six times during an 18-month period. Throughout the year, supplementary questionnaires were also distributed. The two other sources of information for NMCES were interviews with insurance companies and employers responsible for insurance coverage of the household respondents and interviews with the medical providers of 50 percent of the household respondents.

The NMCES sampling design was a stratified multistage area probability design from two independently drawn national area samples. The sample for the household survey consisted of the civilian, noninstitutionalized population of the United States.

NMCES collected the following data items on each sampled individual (348):

- health care expenditures;
- insurance coverage;
- source of payment;
- tax treatment;
- medical services used;
- X-rays, tests, and supplies;
- accessibility y;
- self-perceived health status;
- disability days;
- limitations;
- health or medical conditions;
- age;
- sex;
- race and ethnicity;
- marital status;
- family composition;
- education;
- income; and
- employment.

National Medical Care Utilization and Expenditure Survey (NMCUES).–NMCUES, sponsored jointly by NCHS and the Health Care Financing Administration (HCFA), was first performed in 1980; a second cycle is planned for 1987.

The 1980 NMCUES consisted of two household surveys. One was a national survey that obtained data from a probability sample of the civilian, noninstitutionalized U.S. population. Repeat interviews were conducted with 6,600 households at 12-week intervals. The second survey was a household survey that obtained information from 4,000 Medicaid-eligible households in four States. Information was obtained in these surveys about health status, patterns of health care utilization, charges for health care services received, and methods of payment. Individual and family social, economic, and demographic data were also collected, The household survey data were augmented by information from the Medicare administrative records for persons identified as Medicare beneficiaries.

Specific data items in NMCUES included the following (357):

- conditions and illness,
- disability days,
- emergency room visit,
- hospital outpatient department visit,
- medical provider visit,
- hospital stay,
- prescribed medicine,
- other medical expenses,
- limitations,
- access to health care,
- background information, and
- health care charge and source of payment.

The NMCUES Public Use Files contain respondent data from the national household survey only (357).

A joint survey between NCHS, the National Center for Health Services Research and Health Care Technology Assessment (NCHSR&HCTA) and HCFA is being planned for 1987, as a followup to NMCES and NMCUES. The survey, the National Medical Expenditure Survey, will consist of four components: household, records, institutional, and disease panel. The household component (approximately 13,000 households) will draw its sample from HIS. This innovation will allow oversampling of groups of particular policy interest, such as the elderly, the poor, and persons with functional limitations. Since reliance on household data alone often results in problems of missing data, record checks to supplement respondent information will be important. The institutional component will be used in order to produce an accurate picture of public program expenditures. The Institutional Population Component will survey approximately 10,000 persons in nursing homes, psychiatric institutions, and facilities for the mentally retarded. The disease panel component of the survey will possibly contain up to three “disease panels” of approximately 1,000 individuals each, followed for at least 5 years. HIS would be used as the sampling frame, from which persons with certain conditions can be identified. Besides the core questions of the survey, supplemental disease-specific questions will be administered to these individuals (359).

National Survey of Personal Health Practices and Consequences (NSPHPC). —This survey was initial] y conducted by NCHS in 1979. One goal of the survey was to examine the relation between “personal health practices and physical health status. ” Information was collected from a 30-minute telephone survey of individuals sampled from the population aged 20 to 64 residing in the United States. The "second wave" or followup of the survey was performed in the spring of 1980 and included measures of change in the aggregate population and in individuals between the first and second survey. Thus, it was possible to determine if health practices were stable over time. Self-perceived health status and the utilization of health services were also determined, An attempt was made to learn the "extent to which failure to practice health maintenance leads to illness, and the extent to which illness inhibits the practice of good health habits" (355).

Survey of Disability and Work (SDW).—SDW was conducted in 1978 by the Social Security Administration (SSA). The survey was designed to provide statistics on the number and characteristics of the disabled, to establish national disability rates for various age groups, and to estimate the prevalence of health problems among the population.[1] These data were useful in establishing levels of medical severity. SDW also collected data on work limitations and mode of adjustment; the public's knowledge of Government programs in the area of disability; work incentives; socioeconomic, attitudinal, and psychological factors; and financial status of the individual (i.e., proportion of disabled who were below the poverty level).

To evaluate the adequacy of the SSA program for noninstitutionalized disabled persons and to provide estimates on the number of potential beneficiaries, SDW observed both disabled beneficiaries and disabled nonbeneficiaries. To compare the closeness of the disabled nonbeneficiary population to the beneficiary population and to analyze different characteristics among nondisabled persons, disabled nonbeneficiaries, and beneficiaries, SDW used a two-frame sampling approach. The first frame was a general population frame of noninstitutionalized persons. The 1976 HIS provided data on this general population (120,000 persons). The second frame consisted of recent Social Security disabled beneficiaries and recently denied applicants (also noninstitutionalized). These data were provided by the SSA's Master Beneficiary Record of 1.8 million persons.

The individuals represented in the first frame were classified in one of five categories ranging from nondisabled to severely disabled. Information was obtained from data items reporting "chronic conditions and activity limitation, usage of medical services, and employment status. " Individuals in the second frame were also classified in five categories: one stratum for nonbeneficiaries and four age group strata for beneficiaries. In order to obtain enough working beneficiaries to support the planned analyses, SDW oversampled younger beneficiaries. SDW interviewed a total of 5,652 persons from HIS and 4,886 from SSA to yield an overall total of 9,859 individuals. Care must be taken in using SDW data because of the many problems in sampling design and procedures (see 366).

SDW collected data on the following categories (366):

- family background,
- work experience,
- health conditions,
- attitudinal data,
- work limitations,
- job training,
- income,
- job satisfaction,
- disability benefits, and
- knowledge of Government programs.

Federal Surveys of Special Populations

Hospital Cost and Utilization Project (HCUP).– HCUP is conducted by NCHSR&HCTA. The overall purpose of the project is to identify and explain variations in hospital behavior, use, and costs over time and place.

HCUP data files link hospital, patient, and county information for 384 short-term, general, non-Federal hospitals from 1970 to 1977. (Information on general characteristics of physicians that can be linked to patient abstracts has been obtained for a subset of 160 hospitals.) Twelve major discharge abstract services provide clinical information on the use of inpatient services in sample hospitals. The AHA Annual Survey of Hospitals and the Medicare cost reports provides data on hospital characteristics. Data on community characteristics are obtained primarily from the Area Resource File (see app. D) and from the Bureau of the Census.

Following the implementation of Medicare's PPS in 1983, NCHSR decided to extend the HCUP data to include information for 1980-87 and to enlarge the sample size to 500 hospitals. Sample weighting of the universe of short-term, general, non-Federal hospitals will provide national estimates. By extending the period of data collection, it will be possible to analyze data from three periods: 1) the decade prior to changes in Medicare's reimbursement policy; 2) the years when the Tax Equity and Fiscal Responsibility Act of 1982 was in effect; and 3) the period during which Medicare's PPS was implemented (61).

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[1] Disability was described in the study as "a limitation in the kind or amount of work or housework a person can do resulting from a chronic health condition or impairment lasting 3 months or longer, and may range from the inability to perform any kind of work to secondary limitations in the kind or amount of work performed" (366).

Currently, NCHSR&HCTA is recruiting hospitals for the study, and completion dates of data files will depend on the sources of data and the efforts required to produce uniform records. Patient and hospital files for 1980-84 are expected to be compiled by summer 1986. The lowest predicted time lag between data collection and release of information is 14 months for hospitals and 16 months for patients. Generally, county data from the Area Resource File is available with a 2- to 3-year time lag.

The following represent examples of data items in HCUP files:

- hospital characteristics:
  - —size,
  - —ownership,
  - —scope of services,
  - —revenues,
  - —costs;
- patient characteristics:
  - —diagnostic information;
- community characteristics:
  - —population demographics,
  - —socioeconomic factors,
  - —availability of health resources; and
- physician characteristics:
  - —specialt y,
  - —board certification,
  - —age,
  - —years in practice.

All information remains confidential, so that no individual or institution can be identified separately. According to NCHSR statutes, the HCUP database can be used for research purposes only. The confidentiality ruling does place limitations on what can be studied. No information was collected on patients' complete residence by zip code, city, or county (consistent patient location data are available on a national basis for Medicare patients only). No information is available on patient income, health history, health beliefs, occupation, household size, use of services prior to hospital admission or after discharge, or breadth of health insurance coverage. Despite these limitations, the HCUP database represents a very extensive set of files on hospital utilization (349).

Hospital Discharge Survey (HDS).—HDS, designed by NCHS as a national ongoing survey to monitor the admissions and discharge of patients to and from hospitals, began in 1965. Data for the survey are obtained from a sample of medical records of inpatients discharged from a national sample of short-stay general and specialty hospitals in the United States, The sample for the 1980 HDS included approximately 224,000 medical records from 420 hospitals participating in the study .

HDS provides detailed information on the characteristics of patients (age, sex, race, date of birth, and marital status), diagnosis, surgical operations or procedures, and lengths of stay. Information is also available on patterns of use of care in different size hospitals in the four major geographical regions.

HDS uses a two-stage stratified sampling design. First, a sample of 10 percent of short-stay hospitals is selected from the Master Facility Inventory of Hospitals and Institutions (see app. D). All hospitals containing at least 1,000 beds are selected with certainty; hospitals with fewer than 1,000 beds are stratified according to size and geographic location. Probabilities for selection vary from certainty (for hospitals with at least 1,000 beds) to 1 in 40 (for the smallest hospitals) (26). Second, discharges are sampled from selected hospitals according to a probability sample such that the overall probability of selecting a discharge from each hospital size class is approximately equal.

National Ambulatory Medical Care Survey (NAMCS). —NAMCS is conducted by NCHS and provides annual data from patient records selected from a national sample of office-based physicians. The survey was conducted annually from 1973 to 1981; it was discontinued from 1982 to 1984 for lack of funding. Future surveys are planned for every 3 years beginning in 1985. In the future, the survey may encompass neighborhood health clinics and hospital outpatient facilities as well as office visits. Data tapes and documentation from NAMCS are available to the public and can be obtained from NCHS.

The basic sampling unit for NAMCS is the physician-patient office visit. The sampling frame is composed of all physicians who are listed in the master files of the American Medical Association or the American Osteopathic Association, but physicians who are federally employed and who specialize in anesthesiology, pathology, or radiology are considered ineligible for the survey. The 1981 sample included 2,846 physicians (2,725 M.D.s and 121 O. D. S). Of 2,333 eligible physicians, 1,807 (77.5 percent) participated in the study.

The 1981 NAMCS was a three-stage probability sample of primary sampling units, physician practices, and patient visits. The primary sampling unit is the first level of sampling and consists of a mutually exclusive and exhaustive set of 1,900 distinct geographic areas (counties, groups of counties, and Standard Metropolitan Statistical Areas). A sample of 87 primary sampling units was created by the National Opinion Research Center.

Within each sampled primary sampling unit, eligible physicians were classified into nine specialty groups: general and family practice, internal medicine, pediatrics, other medical specialties, general surgery, obstetrics and gynecology, other surgical specialties, psychiatry, and other specialties. A sample of physicians was then drawn such that the overall probability of selecting any one physician was approximately equal.

The third sample stage, the selection of patient visits, involved: 1) dividing the total physician sample into 52 random subsamples of equal size and assigning each subsample to 1 week in the year; and 2) selecting a systematic random sample of visits by the physician during the assigned week. The sampling rate for patient visits varied from a 100-percent sample for very small practices to a 20-percent sample for very large practices.

Approximately 30 Patient Records were completed during the assigned week. These procedures minimized the data collection workload and maintained approximate equal reporting levels among sample physicians regardless of practice size. Actual data collection was performed by the physician and his or her office staff.

The 1981 NAMCS contains the following data items on each visit (354):

- patient age and sex;
- patient race and ethnicity;
- physician specialty and type of practice;
- principal reason for visit expressed by patient;
- major reason for visit, prior visit status, and referral status;
- diagnostic services ordered or provided;
- principal diagnosis rendered by the physician;
- medication therapy ordered or provided;
- nonmedication therapy; and
- disposition and duration of visit,

National Long-Term Care Survey (NLTCS).–NLTCS was administered in 1982 and 1984 by the Bureau of the Census and was sponsored jointly by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and HCFA.

The 1982 NLTCS was designed to identify the over-65 Medicare population who need assistance with one or more "activities of daily living. " This survey obtained data to assess the following (312):

- the number and characteristics of noninstitutionalized aged persons with varying degrees of impairment,
- the kind and amount of purchased and nonpurchased services received by impaired aged persons,
- the out-of-pocket costs for services and the ability of individuals to pay,
- the number and characteristics of impaired persons not receiving services, and
- the relationship between the degree of impairment of the individual and the services received.

The 1982 NLTCS was conducted in two stages. The first stage obtained a sample of approximately 36,000 persons from the Medicare rolls (HCFA's December 1981 and March 1982 Health Insurance Skeleton Eligibility Write Off files). These individuals were screened with a telephone interview to determine whether they experienced problems with normal daily activities persisting for at least 3 months. In the second stage of the survey, persons in the noninstitutionalized population who were found to have some long-term difficulties (6,400 persons) were interviewed by personal visit. The informal caregivers of those with dependencies were also interviewed (66).

The 1982 NLTCS collected specific data in the following categories (312):

- diseases,
- impairments and health conditions,
- "activities of daily living" and "instrumental activities of daily living" dependent activities,
- level of dependency,
- medical supports,
- social service supports,
- informal supports,
- sources of payment for medical services,
- income,
- assets,
- family structure,
- living arrangements,
- social interaction, and
- mental status.

A second NLTCS was implemented in 1984. This survey included approximately 35,018 participants who were sampled in 1982 and approximately 4,800 selected from Medicare enrollees who turned 65 after April 1, 1982. The 1984 NLTCS made five types of estimates (156):

- longitudinal characteristics for those persons who were impaired in 1982,
- longitudinal characteristics for persons who were not impaired in 1982,
- longitudinal characteristics for persons who were institutionalized in 1982,
- cross-sectional estimates for persons impaired in 1984, and
- cross-sectional estimates for persons in institutions in 1984.

Data tapes, descriptive analyses, and documentation from the 1982 NLTCS are available.

National Nursing Home Survey (NNHS).–NNHS was first conducted by NCHS in 1973-74, and a second survey was completed in 1977. Beginning in 1984, NCHS plans to conduct the survey at regular 6-year intervals.

NNHS collects data on nursing homes, services provided, patients, and staff, Utilization, charges for care, and cost of care can be assessed, as can nursing homes' certification status for participation in Medicare and Medicaid. The 1977 survey also collected information from residents who had been discharged from nursing homes. The 1977 sample, which included all homes that provided some level of nursing care, was expanded from the 1973-74 sample, which did not include homes providing only personal or domiciliary care.

In 1977, 1,698 facilities drawn from the Master Facility Inventory of Hospitals and Institutions (see app. D) were sampled. A sample of residents, discharges, and staff in these facilities was selected for further data collection and interviews.

NNHS provides national and regional estimates of utilization, expenses, and services of facilities; demographic characteristics; health status; services received; charges of residents; and staff. The resident and discharge surveys have data on the following (358):

- demographic characteristics,
- health status,
- functional status,
- participation in social activities,
- monthly charge, and
- source of payment.

The following additions were tested for the 1984 version: brief physical examination; psychiatric evaluation of patient; history of nursing home care; costs of care; and reason for admission (358).

Survey of Institutionalized Persons (SIP) .—SIP was conducted by the Bureau of the Census in 1976. Residents of institutions, their families, and institution administrators were interviewed about the services and resources of long-term care facilities. The residents included persons with chronic conditions (diseases or handicaps), the mentally retarded, and those in nursing homes or homes for the aged.

SIP was designed to provide insights into the process of institutionalization; its impact on individuals and society; and the characteristics of institutions, their resident populations, and the residents' families. The survey included questions regarding social and employment activities, medical needs, care received, and financial status. Specific concerns included the appropriateness of admission, quality of life provided, legal rights, type of care provided, cost and source of payment, and effect of Government programs.

Institutions were sampled in 18 strata: 6 types of institutions (psychiatric, physically handicapped, mentally handicapped, children, nursing homes, other facilities) and 3 facility size categories. The 1973 Master Facility Inventory of Hospitals and Institutions (see app. D) was used as the basic frame for selecting sample institutions. SIP interviewed a total of 9,337 residents over the age of 14, who were mentally and physically able, from the 822 institutions that participated.

Data items collected by SIP included the following (311):

- background information;
- age, sex, education, employment;
- treatment services;
- social activities;
- reason for choice of institution;
- discharge expectations;
- financial status;
- source of payment;
- physician services;
- nursing services;
- counseling and therapy services;
- limitations (activity and function); and
- medication therapy.

The families of residents answered similar inquiries, in addition to ones regarding previous history, discharge expectations, and the effects (including financial) of institutionalization on the family (311).

Private Health Surveys

Private Surveys of the General Population

American Hospital Association (AHA) National Opinion Study.—In 1982, AHA conducted an interview survey of 1,800 heads of household over 18 years of age nationwide. Funded jointly by AHA and the Council on Allied Hospital Associations, the project was intended to provide national data and a common survey instrument that may be used by others to provide comparable local data. The purpose of the survey was to assess public perceptions about health care quality, access, costs, changes in health insurance, and ethical issues. This information will be useful in providing baseline data to measure changes in public opinion over the next few years.

Specific questions were asked in regard to hospitalization, rating of area and nationwide hospitals, health care expenditures, Government regulation of health care, and accessibility of health care. Survey results have been published by AHA (255).

Center **for Health Administration Studies (CHAS) National Survey of Access to Medical Care.—In 1975-76, CHAS and the National Opinion Research Center at the University of Chicago conducted a household survey of the U.S. population that addressed issues of access to health care and problems** in obtaining care when needed. Previous surveys conducted by CHAS (1953, 1958, 1964, and 1971) emphasized total health care experiences and costs. However, there are many comparable items available from the five surveys which permit trends in some key indicators of access to be measured over time. In 1982, a followup telephone survey was conducted by Louis Harris and Associates in conjunction with CHAS (2).

The initial purpose of the 1976 survey was to provide baseline national indicators of access for an evaluation of a program of hospital-based primary care group practices funded by the Robert Wood Johnson Foundation in Princeton, New Jersey. The access framework and questionnaire designed for the survey were developed to provide empirical indicators in order to improve access for the population in areas served by the groups.

Interviews for the 1976 survey were conducted in 5,432 households representing the noninstitutionalized population of the United States. The investigators selected a random sample of an adult and child under 17 years of age from each household, yielding a sample of 7,787 individuals in the 1976 survey. The overall response rate was 85 percent. In addition to the sample of the noninstitutionalized U.S. population, special oversamples of persons experiencing episodes of illness, non-Standard Metropolitan Statistical Area Southern blacks, and persons of Spanish heritage living in the Southwest were drawn.

The following specific data items were collected in the 1975-76 CHAS survey (4):

- characteristics of health delivery systems:
  —availability,
  —number of personnel and facilities,
  —distribution of personnel and facilities,
  —convenience of regular source of medical care,
  —selection of regular source of medical care,
  —sources of medical care used by those with no regular source,
  —sources of regular medical care,
  —type and extent of third-party coverage;
- characteristics of population-at-risk:
  —general health care beliefs and attitudes,
  —knowledge of health care information,
  —education,
  —occupation,
  —age,
  —sex,
  —race and ethnicity,
  —length of time in the community,
  —perceived need,
  —evaluated need;
- utilization of health services:
  —type of provider—physician, hospital, dentist,
  —site of visit,
  —purpose—preventive or illness-related,
  —time interval; and
- consumer satisfaction.

The Equitable Healthcare Survey .—The Equitable Healthcare Survey, designed by Louis Harris and Associates, was sponsored by the Equitable Life Assurance Society of the United States in 1982. Besides obtaining opinions from the general public (1,501 adults), the survey questioned 100 physicians who lead medical societies, 100 hospital administrators, 50 senior health insurance executives, 250 corporate benefits officers, and a national sample of 26 union leaders responsible for health care benefits. The survey explored topics including general attitudes toward the U.S. health care system, utilization of medical services, escalation of health care costs, and cost-containment policies (98).

Hospital Care in America.—Hospital Care in America was a survey of consumers, government officials, and members of the health care community conducted in 1978 by Louis Harris and Associates. The survey was designed to provide an analysis of attitudes toward health and hospital care. The sample consisted of the adult civilian population of the continental United States. Items in the survey included: general attitudes toward health care; preventive medicine; perceptions of health care in the United States; attitudes toward types of hospitals; hospital costs; administration of hospitals; national health insurance; and hospitals and the future (144).

Physician and Public Opinion on Health Care Issues. —The American Medical Association has commissioned a series of surveys since 1972 to measure attitudes on health care issues. The sample consists of 1,503 randomly selected respondents residing in the United States, The interviews were conducted by telephone by a consulting firm. Specific questions included attitudes toward problems facing health care, national priorities for spending, public image of physicians, Medicare issues, and the voluntary physician fee freeze (17).

Private Surveys of Special Populations

Commission on Professional and **Hospital Activities (CPHA) Files.—CPHA maintains one of the largest abstracting services in** the **United States. Over** 1,500 hospitals submit patient discharge information to CPHA, whose master files contain clinical and demographic data on 25 percent of all patients' treated in U.S. short-term, general, non-Federal hospitals. This sample is not random, but depends on member hospitals' data. The National Master Sample Research File is selected from these master files to provide annually 2 million patient records that are nationally representative of short-term general hospitals. The "2 million" file is drawn in quarterly increments of 500,000.

The data collected contain all of the data elements of the Uniform Hospital Discharge Data Set (see ch. 6), as well as additional indicators such as the number of days in care units. The following items represent specific data (64):

- patient identification;

- date of birth;
- race and Sex;
- date of admission;
- type of admission (emergency, from SNF, etc.);
- date of discharge and disposition of patient (home or self-care, SNF, intermediate care facility, short-term hospital, etc.);
- diagnosis (principal and six additional);
- procedures;
- attending physician;
- operating physician;
- expected principal source(s) of payment;
- patient care data (laboratory tests, drugs, vital signs, etc.); and
- stay summary (acute days used, days awaiting SNF or intermediate care facility, etc.) (64).

University of Chicago Access Impact Study of Community Hospital Program. —The purpose of the University of Chicago Access Impact Study, sponsored by the Robert Wood Johnson Foundation, was to evaluate the success of the Community Hospital Program groups in improving access to medical care in the communities they served. Community Hospital Programs tended to attract people who had no previous regular source of care or who used hospital outpatient and emergency rooms. Twelve of the fifty-three Community Hospital Programs were surveyed. Community surveys were conducted in 1978-79 and 2 years later. Randomly selected adults and children were selected for intensive interviewing. Personal interviews were the primary method of data collection, and the questionnaire was modeled after the 1976 National Survey of Access to Medical Care conducted by CHAS and the National Opinion Research Center at the University of Chicago. Respondents were questioned regarding regular source of medical care, convenience (evening, weekend coverage, home visits), utilization, and satisfaction (5).