CDC

Monitoring the Nation's Health
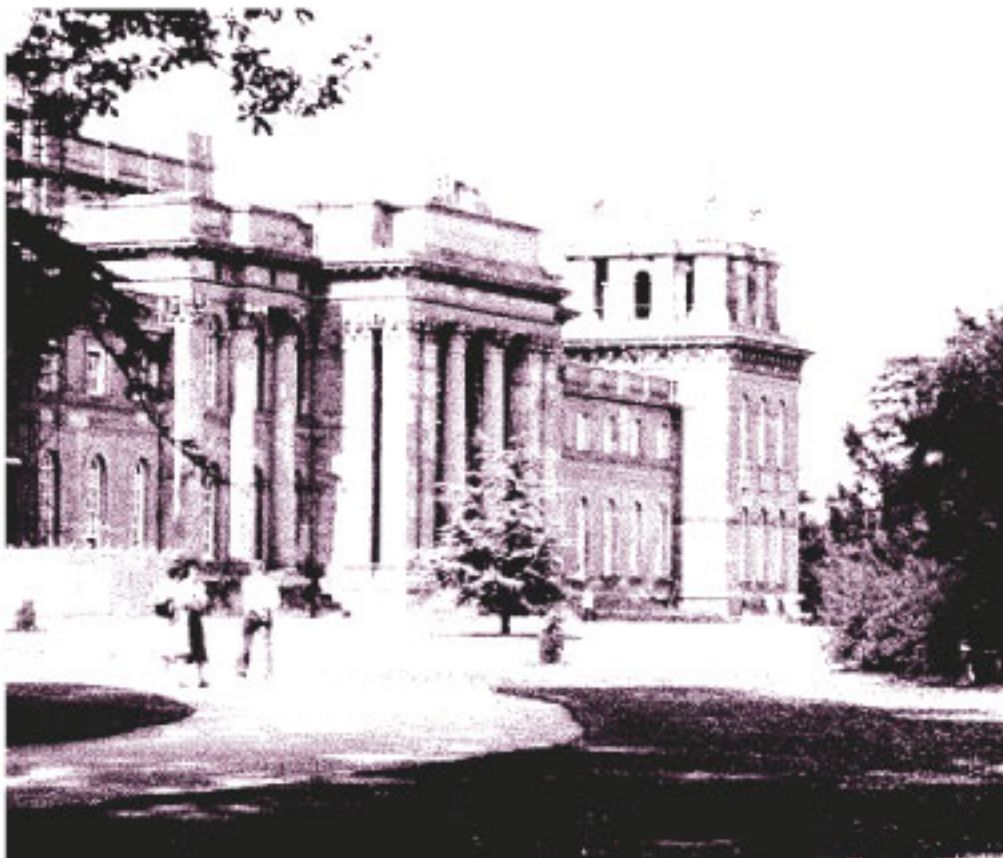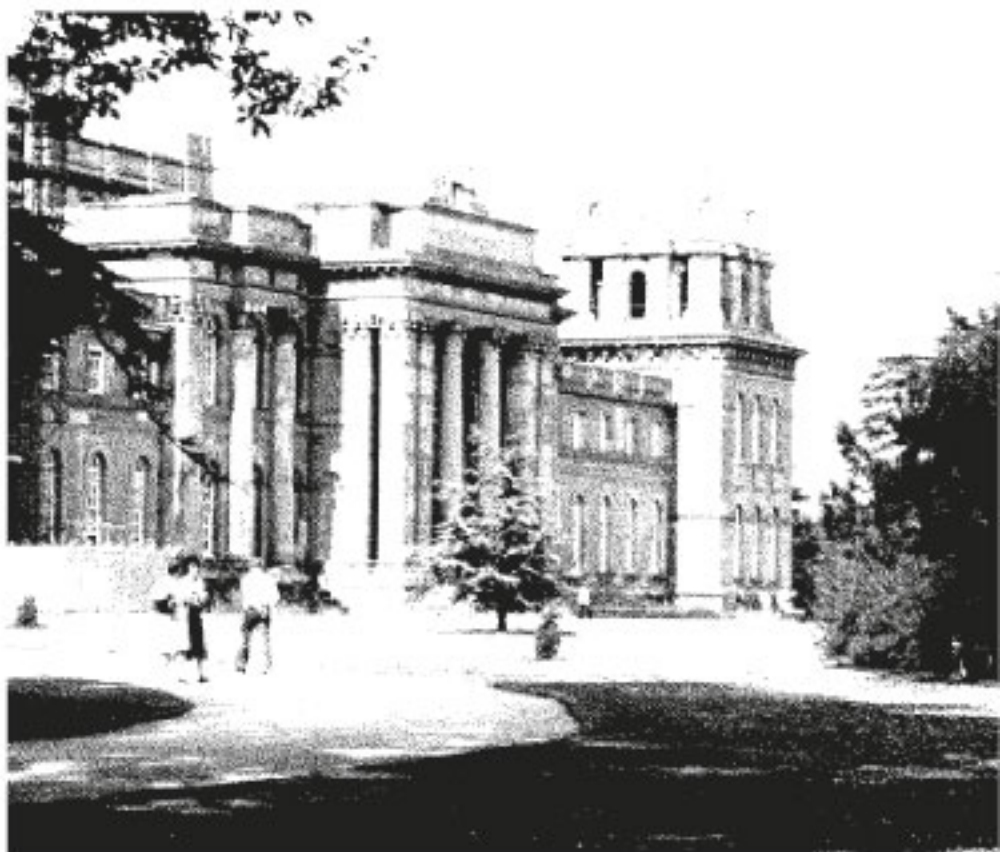
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Catalog of University Presentations 2004-2005

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention • National Center for Health Statistics

Catalog of University Presentations 2004-2005

National Center for Health Statistics

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NCHS University Visitation Program Committee

Kenneth W. Harris, *Chairman*

Dear Colleague:

The National Center for Health Statistics (NCHS), one of the components of the Centers for Disease Control and Prevention (CDC), is the federally designated agency responsible for monitoring and reporting on the Nation's health. Our programs include the coordination of the National Vital Statistics System and a wide variety of large-scale national surveys and research initiatives designed to help the Nation assess and track its health status overall and for many specific population groups.
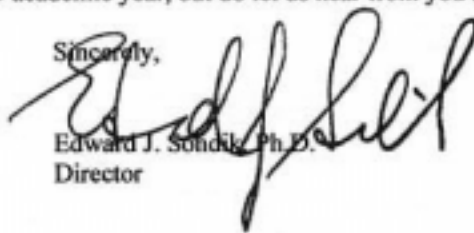
The NCHS University Visitation Program, a Center-funded program designed to encourage greater communication between the university research and teaching community and NCHS, is now in its 21st year. Since its inception, NCHS technical staff members have given more than 600 presentations at schools and universities throughout the country. This year's program covers a broad range of topics highlighting the important national health issues that rely on the data obtained through the Center's surveys and statistical data systems. A wide variety of data used to address national and local health policy issues are produced by these surveys and data systems. Many of these issues are covered by the topics presented in the University Visitation Program. For example, this catalog includes topics as diverse and current as teen births, access to health care, racial and ethnic differences in health, multiple births, and overweight prevalence. Several new topics are being introduced this year. Two in particular are: bridging multiple-race responses to single-race categories for vital statistics and the transition to 2000 census-based populations and its impact on birth and mortality rates. Also included are topics that provide detailed information on how to access and use our data sources, particularly through the NCHS Research Data Center (RDC). The RDC, now in its sixth year, offers researchers the opportunity to access internal micro data files from NCHS surveys that previously were not available to the research community. These files contain lower levels of geography such as State, county, census track, block-group, or blocks, depending on the survey. Other topics describe the Center's efforts in developing innovative methodological and analytical research to address such issues as increased public concerns about confidentiality and changes in survey response rates.

This highly successful program continues to offer much from which to choose. If you are interested in arranging for a presentation, or if you would like more information about the program, please contact:

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Please let us know if topics of interest to you do not appear in the catalog. We will make every effort to honor all requests for the 2004-2005 academic year, but do let us hear from you as early as possible.

Sincerely,

Edward J. Sondik, Ph.D.
Director

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CATALOG OF UNIVERSITY PRESENTATIONS

A. Programs of the National Center for Health Statistics

A-1. The National Center for Health Statistics—Plans for Its Future

A description is given of the current programs and organization of the National Center for Health Statistics (NCHS), and its plans for responding to new health needs and legislative initiatives are discussed.

A-2. Data Resources of NCHS

This presentation is an overview of the programs of NCHS, of the data it produces, and of its methods of acquiring those data resources. Publications, data tapes, CD-ROMs, diskettes, and other forms of data release are described, as are guides to NCHS data and methods of identifying available data on specific topics.

A-3. The Statistical Research and Survey Methods Program of NCHS

This presentation is a description of a basic long-range research program for the improvement of existing measurement methods and for the innovation of more efficient methods for producing and analyzing health and vital statistics. Some of the specific research projects of this program are discussed.

A-4. Integrated Survey Redesign

During the past decade, NCHS embarked on a program of integrating the sample designs of about a dozen independently designed national population and establishment surveys. The National Health Interview Survey (NHIS), the largest of the NCHS population sample surveys, serves as the fulcrum for the integrated survey design. The NHIS microdata set is the sampling frame for NCHS population surveys, and the NHIS primary sampling units (PSUs) serve as the PSUs for the NCHS establishment surveys. The achievements of the integrated design program over the past decade and the research planned for redesigning NHIS after the 2000 census are described in this presentation.

A-5. The National Nutrition Monitoring and Related Research Program

This presentation reviews the goals and extent of the National Nutrition Monitoring and Related Research Program (NNMRRP) in light of current interest topics such as hunger, food labeling, diet, and health. National surveys and data systems that contribute to the monitoring and the surveillance of nutritional status are discussed in an integrated fashion to demonstrate how the components of the NNMRRP supplement and complement each other. Programs such as the National Health and Nutrition Examination Survey, the National Health Interview Survey, the continuing Survey of Food Intakes by Individuals, the Behavioral Risk Factor Surveillance System, and the National Nutrient Data Bank are examined in relation to implementation activities for the Ten-Year Comprehensive Plan for the NNMRRP.

A-6. The Research Data Center (RDC)

NCHS has developed a Research Data Center (RDC) that allows researchers and data users to access internal data files from its numerous surveys that have not been available to the research community until now. The internal files contain lower levels of geography such as State, county, census tract, block-group, or blocks, depending on the survey.

Examples of data systems that are available through the RDC include the National Health Interview Survey, the National Health and Nutrition Examination Survey, the National Hospital Discharge Survey, the National Survey of Family Growth (NSFG), and others. (The NSFG contextual data files consist of the survey data and about 1,300 contextual variables and are available only through the RDC.)

Researchers may use the files to merge other contextual data from the U.S. Census Bureau, the Area Resource File, or other data collected or provided by the researcher (e.g., air pollution data; State, county, or local laws or ordinances; reimbursement policies; medical facilities) to perform contextual analyses while maintaining respondent confidentiality.

Because of the confidentiality constraints, NCHS has not been able to release survey data with lower levels of geography to its data users, which has limited the amount and types of research projects that could be undertaken with its data systems. The development of the RDC begins an exciting new era for NCHS and its data users.

This presentation describes how researchers can gain access to the RDC.

A-7. Developments in Cartography and GIS at NCHS

Mapping of health events at the national level has evolved from labor-intensive procedures to an automated process. Now with Geographic Information Systems (GIS) and digital mapping technology, personal computer applications have become the basis for cartographic output at NCHS. A wide range of statistical mapping techniques and innovative cartographic designs are presented.

A-8. Maternal and Child Health Research Efforts at NCHS

NCHS offers a number of data systems that can be used to address, directly or indirectly, issues in maternal and child health. Among the resources available are the national birth files, State-specific birth files, the linked birth and infant death files, the National Maternal and Infant Health Survey (NMIHS), the Longitudinal Followup to the NMIHS, studies on child immunization, the National Survey of Family Growth, and the Health Interview Survey. This presentation will provide examples of research conducted at NCHS from each of these data systems and touch on subjects such as prenatal care use, national trends in adverse birth outcomes, pediatric health care utilization,

racial and ethnic differentials in birth outcomes, and childhood chronic conditions.

A-9. The Nation's Prevention Agenda: Tracking the Healthy People 2010 Objectives

Healthy People 2010, the third generation of objectives to improve the health of the Nation, was released in January 2000. *Healthy People 2010* includes 467 objectives that encompass a broad spectrum of public health issues, a few of which are nutrition, alcohol and drug use, injuries and violence, oral health, cancer, HIV infection, family planning, and public health infrastructure. Baseline data do not currently exist for over 100 of these objectives (called "developmental"). This provides an agenda for data development over the next decade. This presentation discusses some of the issues and challenges for identifying and developing data sources to track the objectives, including data for special population subgroups and subnational geographic areas. Issues regarding measurement and data quality are also discussed.

A-10. The National Health and Nutrition Examination Survey: 1999 and Beyond

The content of the latest National Health and Nutrition Examination Survey (NHANES), which began field operations in March 1999, will be reviewed in terms of public health issues addressed and methodologies. Discussion of current design of the study, field operations, and planned data releases as well as future planned innovations for the NHANES program will also be presented, including plans for the merger with the USDA Continuing Survey of Food Intake of Individuals (CSFII).

A-11. Coordination for Improved Health Statistics—The National Committee on Vital and Health Statistics and Other Mechanisms

This presentation covers the history and accomplishments of the National Committee on Vital and Health Statistics. In addition, other mechanisms that are promoting comparability and quality of data are reviewed. The development and promulgation of minimum data sets, standard classifications, and other products are discussed.

A-12. Confidentiality and Data Access Policies at NCHS

This presentation reviews the need for statistical, legal, and ethical factors in the development of confidentiality in data collection programs at NCHS and describes how confidentiality affects field practices, data processing procedures, analytical programs, publication policies, and data release arrangements. Overall effect on quality and amount of detail of data available is evaluated. The impact of recent and proposed legislation and changes in institutional relationships is discussed.

A-13. Summary Measures of Population Health

This presentation introduces the concept of summary measures of health that take into account both morbidity and mortality. The discussion will include two major classes of such measures developed so far. This will be followed by a brief summary of issues related to measurement and applications, and NCHS data will be used to illustrate the methods.

A-14. Aging Activities at NCHS

Almost every data system at NCHS includes information on the growing aging population. Aging-related research and data dissemination activities at NCHS (www.cdc.gov/nchs/agingact.htm) include the Data Warehouse on Trends in Health and Aging, the Longitudinal Studies on Aging (see separate presentations in Section B), and a number of research initiatives. They include active life expectancy and associated health care costs, trends in health and disability, women's health, use of prescription drugs, measures of mental health, and comorbid conditions among the aging. Teaching modules on aging based on the tables from the Data Warehouse are being developed to help university faculty and students access up-to-date trends in the health-related behaviors, health status, health care utilization, and health care costs of the aging population in the United States.

Presentations can focus broadly on the trends and the current state of health of the elderly or on any of the research topics mentioned above.

B. Data Systems of the National Center for Health Statistics

B-1. Overview of the Data Systems of the National Center for Health Statistics

This presentation is a summary of the various data collection mechanisms used by the National Center for Health Statistics (NCHS) to gather statistics on the health of the Nation. The types of statistics produced by each are described.

B-2. The Second Longitudinal Study of Aging

The Second Longitudinal Study of Aging (LSOA II) provides a wealth of health-related statistics on the U.S. elderly population. It is a second-generation, multiwave survey of a nationally representative sample of 9,447 civilian noninstitutionalized persons 70 years of age and over. As a second-generation study, one of the major objectives of the LSOA II is to replicate portions of the first Longitudinal Study of Aging (LSOA), conducted with 7,527 persons 70 years of age and over during four interviews (1984, 1986, 1988, and 1990), particularly those portions pertaining to functional status and the causes and consequences of transitions in functioning. A second objective of the LSOA II is to provide a mechanism for monitoring how proposed changes in Medicare and Medicaid and the accelerating shift toward managed care affect the health status of the elderly and their patterns of health care utilization. The LSOA II includes three waves of interviewing. The baseline was conducted between 1994 and 1996. The two followups were administered at 2-year intervals, one in 1997–1998 and one in 1999–2000. For more information about the study, go to http://www.cdc.gov/nchs/lsoa.htm. The purposes, procedures, and data elements are described in this presentation.

B-3. Using Data From the National Home and Hospice Care Survey

The National Home and Hospice Care Survey (NHHCS), a nationally representative multistage sample survey of U.S. home health and hospice care agencies, has been conducted biannually since 1992. This presentation will review survey content, data structure, analytical methods, and limitations of NHHCS. Guidance will be presented on how to avoid common mistakes NHHCS data users make. Specific examples on how NHHCS data can be used for monitoring, analyzing, and evaluating home and hospice care utilization in the United States will be provided. Discussion will include studies using NHHCS data that analyze national trends in elderly home health care and adult hospice care utilization and assess changes in elderly home health utilization after national policy changes.

B-4. Redesign of the National Nursing Home Survey

The National Nursing Home Survey (NNHS) content was revised and expanded to include factors that experts in long-term care and research findings suggest are related to quality of care and resident outcomes. Major new features of NNHS include:

- Additional information on facility characteristics (e.g., how medical services are provided, use of electronic information systems, recreation activities, dining practices, and end-of-life care) and practices (e.g., use of temporary staff, overtime, specialty certification, employment of advance practice nurses, length of orientation, recruitment/retention strategies, turnover rates, use of permanent staffing).
- New information on staff characteristics (educational preparation, years of experience, tenure at the facility, specialty certification of key staff).
- More clinical information on current residents/discharges (e.g., hospitalizations and emergency department visits, pain control, medications, drug reactions, and end-of-life care).
- Linking NNHS to clinical data collected by the Centers for Medicare & Medicaid Services on the Minimum Data Set (MDS).

The additional content, combined with clinical data obtained by linking to the MDS, will allow for exploring relationships between various facility characteristics and practices and resident outcomes. This presentation will review the new features of the NNHS and explore potential new uses for NNHS data.

B-5. The National Health Care Survey

NCHS conducts a family of health records surveys, collectively called the National Health Care Survey, in which information is collected on patient and provider characteristics and the services they provide. The surveys—the

National Hospital Discharge Survey, the National Survey of Ambulatory Surgery, the National Ambulatory Medical Care Survey, the National Hospital Ambulatory Medical Care Survey, the National Nursing Home Survey, and the National Home and Hospice Care Survey—are described in terms of scope, data set, design, data collection methods, processing procedures, and data dissemination. Specific examples of how the survey data have been and can be used for monitoring, evaluating, and planning the use of health care are also discussed. Plans for future survey and research activities are also presented.

B-6.   The National Death Index

The National Death Index (NDI) is a computerized central file of death record information. It is compiled from magnetic tapes submitted to NCHS by the State vital statistics offices. These tapes contain a standard set of identifying information for each decedent, beginning with deaths occurring in 1979. Investigators conducting prospective and retrospective studies can use the NDI to determine whether persons in their studies have died. If so, they can be provided with the names of the States in which those deaths occurred, the dates of death, and the corresponding death certificate numbers. The NDI user can then arrange with the appropriate State offices to obtain copies of death certificates or specific statistical information, such as cause of death. This presentation describes how the NDI operates, how the matching criteria are used to link user records with death records, how to interpret the results of an NDI file search, the effectiveness of the matching process, and how to apply for use of the service.

B-7.   The National Survey of Family Growth (NSFG): An Evolving Tool for the Study of U.S. Fertility and Reproductive Health

This presentation covers a brief review of the survey over nearly five decades, with emphasis on innovations in Cycle 6 (fielded in 2002). In addition to showcasing the content and analytic potential of Cycle 6, particularly the new male

data, possible future developments of the survey are explored.

B-8.   Use of Data From NCHS Regarding Renal Diseases

This presentation is an overview of the sources and uses of data regarding renal conditions. It includes a discussion of information available on renal-related mortality, hospitalization, and other health care use. Use of NCHS data to make prevalence estimates for selected renal conditions is also covered. The presentation will provide some advice on the use of *International Classification of Diseases* (ICD) codes to identify renal conditions and the appropriate interpretation of NCHS data relevant to this topic.

B-9.   Underlying and Multiple Causes of Death

This presentation is an overview of NCHS mortality data, including the role of NCHS, the World Health Organization, and the States in collecting and classifying mortality data. The distinction between underlying and multiple cause-of-death data is emphasized. Advantages and limitations of underlying and multiple cause-of-death data are discussed. Applications of multiple cause-of-death data (entity and record axis), analytical potential, uses, and quality of cause-of-death data are explored.

B-10.   Environmental Data From the National Health and Nutrition Examination Survey

Starting with the first National Health and Nutrition Examination Survey (NHANES I), the NHANES program has periodically collected environmental exposure data on the civilian population of the United States. This presentation reviews environmental exposure data sets from NHANES that are available for analysis and gives examples of how the data can be used.

B-11.   Monitoring the Quality of Healthcare in the United States: The National Healthcare Quality Report

First published in December 2003, the National Healthcare Quality Report (NHQR) includes a

broad set of performance measures that will be used to monitor the Nation's progress toward improved health care quality. Using national and State-level data from multiple Federal agencies, the NHQR provides annual information to Congress, policymakers, and consumers on the status of health care quality and quality improvement throughout the United States. NCHS is working with other Federal agencies in an interagency workgroup to develop a set of initial health care performance measures that correspond to a conceptual framework developed by the Institute of Medicine (IOM). IOM recommended a conceptual framework of a matrix containing dimensions of care (e.g., effectiveness, safety, timeliness, patient centeredness, equity) and patient needs across the life cycle (e.g., staying healthy, getting better, living with illness or disability, coping with the end of life). The NHQR includes priorities established in *Healthy People 2010*, such as heart disease, cancer, and diabetes. This NCHS presentation will provide an overview of the first NHQR, focusing on conceptualizing, measuring, and reporting on health care quality in the United States as well as next steps in the evolution of the NHQR.

B-12. Measuring Health Care Quality with the National Health Care Survey

Researchers and policymakers interested in assessing the quality of health care in the United States can look to the National Health Care Survey (NHCS) fielded by the National Center for Health Statistics for a wealth of data on quality of care.

The NHCS is a family of establishment-based surveys, each of which collects data on the characteristics of the health care establishment, the patients who receive health care services, and the content of the clinical encounter. Because the NHCS includes surveys of hospital discharges (National Hospital Discharge Survey), outpatient visits to physician offices (National Ambulatory Medical Care Survey), and hospital outpatient and emergency departments (National Hospital Ambulatory Medical Care Survey), as well as the National

Nursing Home Survey and the National Home and Hospice Care Survey, quality of care indicators are available across the entire health care continuum and over time. For example, the NHCS can be used to monitor the quality of care provided to individuals with diabetes or heart disease, using indicators from either the inpatient or outpatient care domains. Hospital discharge rates for diabetics undergoing below-the-knee amputations, the proportion of diabetics receiving recommended outpatient tests, the proportion of hypertensive individuals with a script for a first-line antihypertensive drug, or the percentage of nursing home residents who received an influenza vaccine are some of the many possible quality measures available in the surveys that make up the NHCS.

B-13. Operations of the National Health and Nutrition Examination Survey

The practical field operations of the NHANES study will be reviewed with a focus on current methods employed to ensure successful implementation of a large national examination study.

B-14. The NHANES I Epidemiologic Followup Study: 20 Years After NHANES I

This presentation describes the NHANES I Epidemiologic Followup Study. The cohort comprises the 14,407 persons 25–74 years of age who were examined in the first National Health and Nutrition Examination Study (NHANES I). The Followup investigated how factors measured at baseline relate to health conditions that have developed since that time. Three waves of Followup have been completed, 1982–84, 1986, and 1987. Study design, tracing success, and completeness of data collection are reviewed. The mortality experience of the cohort and selected epidemiologic findings are also presented.

B-15. The National Mortality Followback Survey Program

Designed to supplement data routinely collected from death certificates, this presentation gives an overview of the development of the program, with an emphasis on the two most

recent surveys conducted in 1986 and 1993. Included is a discussion of the sample design, development and content of the data collection instruments, data collection and quality control procedures, data processing procedures, and the dissemination of the data. Also presented is a discussion of future directions for the program.

B-16. Overview of the Ambulatory Medical Care Surveys

The National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) are conducted annually to provide comprehensive data on the patient, provider, and visit characteristics of visits to physician offices and hospital emergency and outpatient departments. Using the sampling weights allows researchers to estimate national statistics on diagnoses made, therapies used, medications prescribed, and differences found in provider caseloads and practices. Data may be used for epidemiological studies as well. This presentation provides an overview of the NAMCS and NHAMCS, the availability of the data, and significant findings.

B-17. Third National Health and Nutrition Examination Survey

The Third National Health and Nutrition Examination Survey (NHANES III) content is described in terms of public health issues addressed and methodologies. Discussion of the sample design and population coverage, including response rates, is presented for issues that should be considered as the data are analyzed. The current status and availability of microdata tapes, as well as NCHS plans for data analysis, are presented.

B-18. Reporting Findings From Health Examination Surveys: Challenges and Solutions

The methods employed by NHANES in reporting back to study participants of extensive and often sensitive clinical results will be reviewed. Discussion will address specific unique protocols developed for NHANES, including a system for reporting

sexually transmitted diseases (STDs) results by telephone, using passwords, and the procedures for determining how abnormal results are reported and assessing the severity of abnormal results.

B-19. Complementary and Alternative Medicine and the National Health Interview Survey

This presentation provides an overview of the 2002 Complementary and Alternative Medicine (CAM) Supplement to the National Health Interview Survey (NHIS). A review of existing research on CAM utilization is presented, with particular emphasis on recent analyses utilizing data from the 1999 NHIS. Building on this review, the key development activities surrounding the supplement are discussed, including the formation and convening of an expert panel, questionnaire design, and cognitive testing. Question-response problems that arose during the latter are highlighted along with resulting instrument revisions designed to improve data accuracy. The presentation concludes with an overview of the fielded questionnaire, showcasing its content and analytic potential.

B-20. The National Health Interview Survey: An Overview

For nearly 50 years, the National Health Interview Survey (NHIS) has been monitoring the Nation's health by means of face-to-face interviews with large cross-sectional sample surveys of the population. This presentation gives an overview of the NHIS: origins and history, design and content, analysis and dissemination, and uses for making and evaluating public health policy. Emphasis is given to recent changes in the NHIS that have improved its accuracy, timeliness, accessibility, and policy relevance, such as computer-assisted personal interviews and release of microdata on the World Wide Web.

B-21. The National Immunization Survey: An Overview and Analysis of Survey Data

The National Immunization Survey (NIS) collects information on the immunization coverage of children 19–35 months of age

across the United States. Data are used to monitor immunization coverage in the preschool population in 78 nonoverlapping geographic areas. The survey is a collaborative effort between NCHS and the Centers for Disease Control and Prevention's (CDC) National Immunization Program. This presentation can include recent findings, background on the survey design, methodological issues, and questionnaire content.

B-22. A Comparison of Survey Approaches: The NHIS, State and Local Area Integrated Telephone Survey (SLAITS), and the Behavioral Risk Factors Surveillance System (BRFSS)

The NHIS, SLAITS, and the BRFSS are three large population-based surveys sponsored by the CDC. This presentation addresses the similarities and differences in populations, data collection techniques, and questionnaire wording and topics and discusses the appropriate purposes of and uses for each survey and its data.

B-23. Health Examination Surveys—What Can They Contribute to Assessing the Nation's Health?

The purpose and methodologies used in the National Health and Nutrition Examination Surveys are described in detail. Uses of the data are emphasized with respect to national health and nutritional issues. How uses affect future study design is discussed in terms of sampling and content.

B-24. The Third National Health and Nutrition Examination Survey—Contributions to Nutrition Monitoring

The Third National Health and Nutrition Examination Survey (NHANES III) sampled over 40,000 Americans in 89 locations across the United States in two 3-year phases that began in 1988 and ended in 1994. NHANES III features many components, including 24-hour dietary recalls, food frequencies, interviews, biochemical assessments, physical examinations, and physiological testing that

contribute to monitoring the dietary, nutritional, and health status of the U.S. population. This presentation describes the methodologies used to assess nutritional status in NHANES III, examines the uses of nutrition monitoring data, and illuminates the survey's role in the National Nutrition Monitoring and Related Research Program.

B-25. Injury Data From the Ambulatory Medical Care Surveys

The National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) are conducted annually to provide comprehensive data on the patient, provider, and visit characteristics of visits to physician offices and hospital emergency and outpatient departments. The surveys include items on external cause of injury, place of injury, whether the injury was related to work, and the intentionality of the injury. The surveys provide one of the best national resources for data on nonfatal injuries and the burden on the health care industry. This presentation provides an overview of the major findings of studies looking at ambulatory injury visits and methodological and analytical considerations when using the survey data.

B-26. Health Insurance Data From the National Health Interview Survey

Improving the health care access of the uninsured population in the United States is an important health policy issue. The National Health Interview Survey (NHIS) collects health insurance coverage data for the civilian noninstitutionalized population. Detailed information is available on these coverage types: private, Medicaid, Medicare, Children's Health Insurance Program, military, Indian Health Service, and other public programs. Managed care information is obtained for the private, Medicaid, and Medicare populations. For the uninsured population, the reasons for not having health care coverage are determined. The NHIS collects extensive sociodemographic and health variables that may be related to the different types of health care coverage.

B-27. Testing Disability Questions in the NCHS Cognitive Lab

In recent years the Questionnaire Design Research Laboratory in the NCHS Office of Research and Methodology has conducted several rounds of cognitive testing on a variety of disability questions. Cognitive testing is a methodology designed to reduce response error to survey questions at an early stage in questionnaire development. The questions were designed to elicit information about aspects of deafness, blindness, mobility limitation, depression, and environmental barriers to participation. This presentation will describe the process of testing potential disability questions and the findings from the work.

B-28. The Matched Multiple Birth File

In the United States between 1980 and 2002, the number of twin births climbed 83 percent. The number of triplet-plus births rose more than 400 percent from 1980 to 1998 before declining slightly in recent years. In 2002, nearly one-fourth of all low birthweight infants were born in a multiple delivery, and 15 percent of all infant deaths were born in multiple deliveries. Despite their growing numbers and the substantial impact multiple births are exerting on measures of infant health, the United States has lacked a national database with information on sets of multiples. This talk describes the first comprehensive U.S. data file to include matched sets of births and fetal deaths in multiple deliveries. The Matched Multiple Birth Data Set was created to fill a gap in U.S. natality and fetal death files; these files, based on birth and death certificate data, contain important data on individual events but lack information on multiple sets, and set mates are not linked together in any way. As a result, it has not been possible to examine basic characteristics of the multiple set, such as gender-type and birthweight differences among set mates. The new Matched Multiple Birth File Data Set includes a wealth of information on sets of twins, triplets, and quadruplets born to U.S. residents for 1995–2000. The vast majority (98.8 percent) of all twin, triplet, and

quadruplet records were matched for a total of 658,484 sets of twins, 37,453 sets of triplets, and 3,207 sets of quadruplets. Corresponding linked infant deaths are also included.

B-29. The State and Local Area Integrated Telephone Survey (SLAITS): Surveys of Children's Health

SLAITS is the newest data collection tool at NCHS. By using the same random-digit-dial telephone survey approach and sampling frame as the ongoing National Immunization Survey of the National Immunization Program, SLAITS provides a mechanism to collect data quickly on a broad range of topics at the national, State, and local levels. SLAITS is funded through sponsorship of specific surveys, which recently have included the National Survey of Early Childhood Health, the National Survey of Children with Special Health Care Needs, the National Survey of Children's Health, and the National Asthma Survey. This presentation can also emphasize SLAITS design and survey operations as well as the challenges inherent in crafting telephone surveys of children's health that meet State and local health data needs.

B-30. Use of Data on Aging From NCHS and Other Federal Agencies in the Data Warehouse on Trends in Health and Aging

The Data Warehouse on Trends in Health and Aging (www.cdc.gov/nchs/agingact.htm) contains aggregate data from NCHS, the Centers for Medicare & Medicaid, the Bureau of Labor Statistics, and the U.S. Census Bureau and provides up-to-date trend information on health-related behaviors, health status, health care utilization, and health care costs of the elderly population in the United States. Teaching modules on aging developed by the American Society on Aging, the Social Science Data Analysis Network at the University of Michigan, and NCHS (www.asaging.org/nchs) use this Data Warehouse to illustrate selected topics related to aging. These modules are intended for university students and faculty and for professionals working in health and human service organizations. The Spanish version of

the Data Warehouse may help students whose primary language is Spanish navigate the wealth of information on aging available at NCHS. The statistical testing utility provided at the Data Warehouse on Trends in Health and Aging Web site allows users to perform various statistical tests on the data.

This presentation can provide an introduction to the data sources on aging used in the Data Warehouse, describe and demonstrate the Data Warehouse and use of the tables, or provide an overview on any of the topics mentioned above. With enough computers, a hands-on workshop is also possible.

B-31. Issues Related to the Use of the Geographic Detail Available in the National Mortality and Natality Public-Use Files

The presentation reviews the level of geographic detail available in the public-use mortality and natality files. In the course of the presentation, participants will become familiar with how geographic detail in these files is collected and coded. This discussion will include an overview of how coding has changed over the years, specifically the transition from unique NCHS codes to standardized Federal Information Processing Standards (FIPS) codes. Participants will also learn how FIPS codes can be used to get data into Geographic Information Systems software for analysis. Limitations and issues analysts need to be aware of when using subnational levels of geography will also be discussed in some detail. Examples of appropriate use of the data will also be provided.

C. Methodology

C-1. Quality of Rare Item Coding

Generally, quality control systems are designed to ensure that the processes measured are under statistical control and to provide for courses of action when the process is no longer in control. As most quality control systems are based on sample verification, the quality measure usually refers to the overall process rather than to specific components. For example, a coding operation may be performed within the established quality standard even though specific categories of codes, especially those that rarely or infrequently occur, have very high error rates. Often it is not clear whether these items with high error rates are inherently more difficult to code or whether their high error rates result more from the limited coding experience associated with their lower frequencies of occurrence. This presentation includes a discussion of some of the procedures tested at the National Center for Health Statistics (NCHS) to identify and correct errors associated with the coding of rare but critical items in selected NCHS data systems.

C-2. Quality Control Procedures for Medical Coding

This presentation is a description of recent modifications made in the quality control procedures for medical coding of data from three of NCHS's data systems. The modifications substantially reduced the original resource requirements needed to operate the quality control procedures while maintaining the ability to provide unbiased estimates of coding quality.

C-3. NCHS Approach for Bridging Multiple-Race Response to Single-Race Categories for Vital Statistics

This talk describes models developed at NCHS to bridge the Census 2000 multiple-race resident population to single-race categories and the resulting bridged-race population estimates. In 1997, the Office of Management and Budget issued Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, superseding the 1977 standards. The 1997 revision incorporated two major changes: 1) the minimum set of race categories increased from four to five; and 2) respondents must be allowed to select one or more race categories when responding to a query on their racial identity. Race data in Census 2000 were collected according to the 1997 standards, but race data on birth and death certificates continue to be collected according to the 1977 standards, with the result that the numerators and denominators used for vital rates have incomparable race data. Thus, it was necessary to develop a bridging method so that race-specific vital rates could be calculated. The bridging methodology developed by NCHS uses regression models, obtained from the 1997–2000 National Health Interview Surveys, to bridge the multiple-race population counts to single-race categories. The models include person-level and county-level covariates. The resulting parameter estimates and population counts are presented.

C-4. Applying Cognitive Interviewing to Questionnaire Design

Cognitive interviewing methods are increasingly used to design, test, and evaluate survey questionnaires. These methods rely on theories of cognitive psychology and intensive interviewing protocols to identify problems with survey questions and improve researchers' understanding of what responses mean. This presentation is an overview of the principles and methods of cognitive interviewing, including examples of some interviewing results. Additional topics can include how laboratory methods complement other forms of questionnaire evaluation and recent investigations to enhance cognitive interviewing methodology. The length and scope of the presentation are flexible and can be adjusted to the background of the audience.

C-5. Issues in Standardizing NCHS Mortality Data

This presentation discusses the need for eliminating, and methods designed to eliminate, the confounding effects of population composition on comparisons of death rates between groups or over time. The focus will be primarily on age standardization or age adjustment, although issues in standardizing for other compositional factors will also be discussed. The presentation will cover both the direct and indirect methods of standardization.

In addition, issues related to changing the standard weights used in the direct method will be discussed.

C-6. Use and Interpretation of Diagnostic Statistics From Selected NCHS Data Systems

NCHS reports that present data from two or more data systems may show substantially different magnitudes for what is nominally the same health condition or health care service for a condition. This is true even when the same classification of diagnoses has been used in tabulating the data. This presentation describes the factors that affect the use and interpretation of diagnostic data, that is, information on the occurrence of diseases, causes of death, health conditions, and physiological characteristics that are collected in selected NCHS data systems.

C-7. Introduction to Sampling for Health Professionals

This presentation is an introduction to survey sampling for health professionals who need a basic understanding of sample surveys. The objectives of the seminar are to present a conceptual framework for survey sampling, introduce common terminology, present the steps involved in survey sampling, explain common sampling strategies, and present criteria for good sample design. The length and technical sophistication of the seminar are flexible.

C-8. Stratifying Primary Sampling Units

A common survey design problem is the stratification of primary sampling units (PSUs) before sample selection. Historically, stratification has been accomplished either judgmentally or through the use of custom-written computer software. This problem can be addressed through standard cluster analysis techniques. The use of the Statistical Analysis System (SAS) procedure, PROC CLUSTER, is demonstrated in the context of an example from the Hispanic Health and Nutrition Examination Survey (HHANES).

C-9. Expanding Disease Surveillance Opportunities With Geographic Information Systems (GIS)

Digital cartography has become one of the more important technologies in health surveillance in the 21st century. GIS provide a mechanism for integrating ''n'' map layers of geographic-referenced observations through highly sophisticated surface generation techniques and a variety of map algebras. Coefficients of association can in turn be used to generate and model complex spatial relationships that have otherwise been impossible or difficult to detect.

C-10. Pitfalls to Avoid When Designing Survey Questionnaires

This presentation provides an overview of general principles of questionnaire design as well as interesting problems detected when testing questionnaires in the cognitive research laboratory.

C-11. The Transition to 2000 Census-Based Populations: Impact on Birth and Mortality Rates

This presentation gives an overview of the challenges associated with the process of transitioning to 2000 census-based populations and the effect of this transition on vital statistics (birth and mortality). The presentation will cover: the changes to the 2000 census, highlighting issues associated with the collection of race and ethnicity data under revised Statistical Policy Directive 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting, issued by the Office of Management and Budget (OMB) in 1997; the impact of the revision on the estimation of birth and death rates; and the process of bridging the new population estimates to conform to the 1977 OMB standard still in effect in the vital statistics system. The impact of revised populations on overall birth and mortality rates, including rate trends by race and Hispanic origin and related measures (e.g., life expectancy) will also be discussed.

C-12. Question, Questionnaire, and Survey Design in the National Health Interview Survey

The National Health Interview Survey (NHIS) is an annual survey in two main parts: a core that stays essentially the same from year to year and one or more topical modules that add new questions or topics for a given year. This presentation will cover the concepts underlying the design of a new topical module, including: objectives to be reached; concepts to be included; question design, including cognitive testing in a questionnaire design laboratory; survey design, including questionnaire flow and data output; computer specifications; local and field pretests; and the kind of data and publications that result.

C-13. Implementing the National Health Interview Survey: Questionnaire Design, Fieldwork Procedures, Quality Control, and Data Processing

Like any large, high-quality national survey, the implementation of the annual National Health Interview Survey (NHIS) involves detailed planning of scores of tasks undertaken by hundreds of people. This behind-the-scenes presentation traces the survey process from the first recognition of a health data need to the creation and analysis of final weighted data that meet that need. Case studies illustrate problems that survey planners must solve, such as converting paper questionnaires to computerized versions, compensating for declining public cooperation, and complying with new safeguards on confidentiality. This presentation will be especially interesting to those who are studying survey methods or using survey data.

C-14. Sample Design, Weighting, and Estimation for the National Health Interview Survey

The National Health Interview Survey (NHIS) is a multipurpose health survey, and it is the principal source of information on the health of the civilian noninstitutionalized household population of the United States. The NHIS data are obtained through personal interviews with household members conducted each week throughout the year. These interviews produce a probability sample of households. NHIS data are obtained through a complex sample design involving stratification, clustering, and multistage sampling, and the weights are subject to several adjustments. Variance estimation methodology involves numerous simplifying assumptions about the design and weighting. This presentation focuses on sampling design and its impact on weighting calculations and variance estimation procedures. Formation of sampling weights and detailed procedures for taking the sampling design into account for variance estimation are also discussed.

C-15. Problems in International Comparison of Health Services Data

International data on the supply, organization, and use of health services are discussed. Common international differences from the United States in definitions of basic measures such as hospital discharge, specialist, and physician visit are described. The importance of the differences and approaches to adjusting data to improve comparability are examined.

C-16. The International Classification of Diseases (ICD) and Its Use for Mortality

The ICD is used worldwide as the classification standard for diagnostic and cause-of-death statistics. It is increasingly being used as the basis for reimbursements to health care providers in a number of health care delivery systems in the United States and several other countries. The wide range of uses to which this classification is being put, as well as its periodic revision, present issues of data quality, appropriate analytic techniques, and interpretation.

C-17. Assessing Customer Satisfaction in a Federal Statistical Agency

Executive Order 12862, issued in September 1993, requires all Federal agencies to survey their customers to determine the kind and quality of services wanted and the level of satisfaction with existing services. This

presentation describes how NCHS is responding to a Presidential directive to assess customer satisfaction. Innovative discussion group methodology was used to obtain input from data users representing a variety of sectors in eight small discussion groups at the 1994 NCHS Data Users Conference. Similar procedures were used to assess customer satisfaction at the 1995 Public Health Conference on Records and Statistics. This presentation describes the methods used; some results of the sessions; and how Federal agencies can unobtrusively incorporate customer satisfaction evaluations into current programs, improve outreach aimed at current and potential customers, and identify gaps in current and future products or services needed by private and public sectors.

C-18. Some Properties of Multidimensional Statistical Tables

Two-dimensional tables of counts enjoy several mathematical properties that facilitate statistical analysis. Unfortunately, several of these properties do not extend to three dimensions and higher. This presentation will describe these properties, illustrate by example their failure to extend, and discuss implications in areas such as survey sampling and statistical disclosure limitation.

C-19. Integrated Survey Design

Integrated survey design refers to designs for families of linked surveys in which one (or more) of the surveys in the family serves as the sample frame(s) for the others. NCHS's national household and establishment surveys were originally designed as independent surveys. This presentation is a discussion of the progress being made toward integrating the designs of NCHS household and establishment surveys, with the National Health Interview Survey serving as the sampling frame for the other surveys.

C-20. Construction and Use of U.S. Life Tables

This presentation focuses on methodological issues in the construction and use of U.S. life tables. Both theoretical issues and practical methods are discussed. Life table methods can be used to show much more than life expectancy. Specialized uses of life tables are discussed, including survival analysis, multiple decrement life tables, and cause-elimination life tables.

C-21. Survey Data Quality in the National Health Interview Survey

The final quality of the data obtained in a survey is affected by all phases of data collection, including topic selection, wording and ordering of questions, method of data collection, editing processes, analytic research, testing of the product, output files, and documentation. This presentation addresses issues, processes, and solutions that have been developed to maintain and improve the quality of the data from the NHIS.

C-22. Collection of Sensitive Data in the National Survey of Family Growth

In the 2002 National Survey of Family Growth (NSFG), two primary strategies were used to improve the reporting of sensitive events among women and men of reproductive age: 1) a $40 cash incentive was given to all respondents; and 2) a portion of the interview was conducted with a self-administered technique called audio computer-assisted self-interviewing (Audio CASI). Experience with the 1995 NSFG, as well as several other surveys, demonstrated that these approaches can elicit more reports of sensitive data such as abortion, HIV-risking behaviors, number of sexual partners, and forced intercourse. This presentation will review past evidence as well as results of using these strategies in the 2002 NSFG.

C-23. Using Focus Group Methodology in Questionnaire Design

In the past 5 years, using focus group methodology to design health questionnaires has gained widespread interest among survey researchers. Focus groups are qualitative in nature and provide researchers with valuable insights and a better understanding of people's ways of thinking. They afford the researcher a

rare opportunity to obtain potential respondents' perceptions, expectations, experiences, and ideas about a research issue before developing or finalizing a questionnaire. This presentation provides a basic understanding of how focus groups are conducted (e.g., identifying and recruiting participants, developing the moderator's guide, audio- and videotaping results for analysis, and evaluating results), potential uses to minimize response errors in questionnaires (e.g., clearly describing the purpose of the study, item wording and order, and identifying optimal item response formats), and implementing results to construct a quality questionnaire.

C-24. How Respondents Decide Whether to Answer a Question: Implications for Item Nonresponse

Survey item nonresponse (including refusals to answer questions and ''don't know'' responses) creates obvious challenges for survey analysts. Some factors involved in respondent decisions regarding whether to answer a question include what they know, what sort of accuracy they perceive the questioner expects, and their motivation to provide this information. Of course, researchers make numerous design decisions that can affect rates of item nonresponse. In order for researchers to make these decisions appropriately, it is important to know how respondents decide whether to answer. This presentation is intended to help researchers understand the sources of item nonresponse in general and to propose data collection strategies that attack item nonresponse at the actual source.

C-25. Analyzing Complex Survey Data

This presentation focuses on the statistical methods and software for the analysis of complex survey data. In particular, variance estimation, categorical data analysis, and logistic regression analysis are addressed. The emphasis in this presentation is on statistical methodology and how to adjust test statistics to account for survey design features. Examples to illustrate the methods are taken from NCHS population-based surveys such as the National

Health Interview Survey, the National Health and Nutrition Examination Surveys, and the National Medical Expenditure Survey.

C-26. The Use of Survey Data Analysis (SUDAAN) for Complex Survey Data

The SUDAAN software package can be used to produce variance estimates, including the use of poststratification, and to analyze complex sample survey data. The most recent version of SUDAAN includes modules for continuous and discrete data, quantile estimation, ratio estimates, categorical data analysis, regression analysis, logistic regression analysis, and survival analysis. This presentation focuses on the content and syntax of the software. Examples from NCHS population-based surveys are used to illustrate the software.

C-27. Spanish Translation Issues: Language, Culture, or Both? A New Translation Methodology That Helps You Do It Right

As of the 2000 census, the Hispanic population is about equal to the African American population, comprising over 12 percent of the U.S. population. Because of immigration and increasing multiculturalism in the United States, there is a growing awareness of the need to translate questionnaires into Spanish and other languages for government and other surveys. What is the best way to translate a questionnaire into another language? What are some of the pitfalls? What are some of the solutions? Is culture separate from language? Tell us about your experiences and hear from the experts in the trenches concerning what does and does not work.

C-28. Compensation Methods for Missing Data in National Surveys

This presentation includes a description of the procedure used to compensate for missing data due to unit and item nonresponse. It also discusses procedures to produce analysis weights for the data from Phase 1 of the Third National Health and Nutrition Examination Survey (NHANES III), 1988–91. Topics include a summary of the compensation methods for missing data; sample design for NHANES III;

procedures used to identify weighting classes to adjust the basic sampling weights for unit nonresponse; the use of health variables in addition to sociodemographic variables; household size; and geographic location to protect against bias in survey estimates, ratio adjustments, and linearization methods for variance estimation.

C-29. Healthy Life Expectancy: Concept, Methods, and Applications

Healthy life expectancy is one of the summary measures of health that takes into account both morbidity and mortality. The focus of this presentation will be the conceptual framework of healthy life expectancy. NCHS data will be used to discuss the application of life table techniques in the estimation of healthy life expectancy.

D. Analysis and Epidemiology

D-1. Decreasing Hospital Use in the 1990s

According to data from the National Hospital Discharge Survey, people spent almost 40 million fewer days in short-stay hospitals in 1997 than they did in 1990. The rate of hospital days decreased by 27 percent, due primarily to a 20 percent decline in the average length of stay. The discharge rate declined by only 8 percent. Trends are examined for age and sex groups, geographic regions, diagnostic categories, and types of surgeries.

D-2. Trends in Hepatitis B Virus Using Data From NHANES II and NHANES III

This presentation describes data from the second and third National Health and Nutrition Examination Surveys (NHANES) to look at trends in the seroprevalence of Hepatitis B Virus infection in the United States. Due to the extensive data collected in NHANES, serologic markers can be correlated with a variety of demographic characteristics and health variables.

D-3. Multiple Births: Trends and Outcomes

From 1980 to 2002, the number of twin births rose 83 percent (from 68,339 to 125,134), and the twin birth rate rose by 65 percent (from 18.9 to 31.1 per 1,000 live births). The number and rate of triplet and other higher order births have climbed even more dramatically: the number of triplet births rose from 1,337 to 7,401, and the higher order multiple birth rate increased from 37 to 184 per 100,000. The rapid rise in multiples has been attributed to an increase in delayed childbearing and in the use of fertility-enhancing therapies. However, both mother and child are at a high risk of poor outcome in a multiple gestation; multiple births are more likely than singletons to be born too early and too small and to die within the first year of life. Trends, outcomes, and the reasons behind the amazing climb in multiple births are discussed and interpreted. The use of the new Matched Multiple Birth File, which includes 6 years of matched sets of twins, triplets, and quadruplets, will be discussed.

D-4. Twins and Other Multiple Births: Time Trends and Perinatal Outcomes

Perinatal and infant outcomes among twins and other multiple births have been studied in several National Center for Health Statistics (NCHS) data systems. For example, the U.S. National Natality (live birth) Files have been used: 1) to investigate the increase in the rate of twin, triplet, quadruplet, and quintuplet births over the last two decades; and 2) to generate intrauterine growth standards (centiles of birthweight-for-gestation) for twins. The U.S. Linked Birth/Infant Death Data Sets have been used: 1) to compare birthweight-specific infant mortality in singletons, twins, and triplets; 2) to study time trends in infant mortality in twins and triplets; 3) to study the relationship of maternal risk factors to twin infant mortality; and 4) to investigate the effect of birthweight discordance on twin infant mortality. The more important findings from these NCHS studies of multiple births are presented and discussed.

D-5. Issues in Women's Health: Menopause, Hysterectomy, and Hormone Replacement Therapy

This presentation uses the 20-year followup in the NHANES I Epidemiologic Followup Study to address health events regarding menopausal issues, specifically use of postmenopausal estrogen and progestin therapy and hysterectomy. It will cover how the questions related to these topics have been asked over each of the followup waves and what methodological issues are raised by changes in the questions. Estimates of hormones ever used, lengths of use, and age at last use will be presented as well as socioeconomic correlates of these endpoints. Similarly, use of hysterectomy operations according to various socioeconomic factors will be covered. The data will also be used to look at the potential bias introduced into studies of disease associations with use of hormone therapy due to differences between users and nonusers.

D-6. Puerto Ricans and Asthma: Nature, Nurture, or Both?

This research uses data from the 1998 NHIS to explore behavioral and environmental risk factors for asthma in conjunction with Hispanic ethnicity.

D-7. Do Older Adults in the United States Have Access to Health Care? Data From the National Health Interview Survey

In 1993, over 3.3 million older adults 65 years of age and over had at least one unmet health care need. Older adults who do not supplement Medicare with private coverage are twice as likely to have unmet medical needs, including routine immunizations. In this presentation, data from the National Health Interview Survey (NHIS) Access to Care and Year 2000 Supplements are used to show the problems U.S. elderly persons have in obtaining health care. The NHIS uses a nationally representative sample of the civilian noninstitutionalized population of the United States. This presentation will examine regular source of care, unmet medical needs, and clinical and preventive services in relation to selected demographic variables and insurance coverage. These issues will be presented with the most current NHIS data available.

D-8. Changes in Hospital Care for Childbirth

Changes in the care provided to women hospitalized for childbirth during the 1980s and 1990s are examined using data from the National Hospital Discharge Survey. Rates of cesarean deliveries increased until the late 1980s, declined for a few years, and then leveled off. Other obstetrical procedures, such as artificial rupture of membranes, medical induction of labor, and vacuum extraction greatly increased in the 1980s and 1990s. However, two common procedures, forceps delivery and episiotomy, decreased substantially during this period. The average length of a hospital stay for childbirth decreased until 1995, but then increased, mainly because of fewer stays of 1 day or less.

D-9. Analyzing Data From the National Mortality Followback Survey

All our lives will end, but we hope for a long and vibrant life. The 1993 NMFS provides a unique opportunity to examine: 1) socioeconomic differentials in mortality, 2) health risk behaviors in relation to mortality, 3)

disability in the last year of life, 4) the reliability and validity of certain items reported on the death certificate, and 5) identification of strategies to prevent deaths due to trauma. This session discusses the content, data structure, analytical methods, and limitations of the 1993 NMFS. The results from analyzing various topics contribute to the understanding of health-related issues for disease prevention and health promotion.

D-10. America's Children: Key National Indicators of Well-Being

To foster coordination of the data collection and reporting on children, NCHS participates with other Federal agencies in the Federal Forum on Child and Family Statistics. The annual publication *America's Children: Key National Indicators of Well-Being*, one of the main products of the Forum, utilizes data from several Federal agencies to provide a summary of national indicators of child well-being and monitors them over time. An overview of the report will be presented, and issues related to selecting national child well-being indicators will be discussed.

D-11. Mental Health Data in the National Health Interview Survey

Data on mental health and the use of mental health services by children and adults are collected in the National Health Interview Survey (NHIS). Questions about mental health are often considered to be sensitive for a household interview. This presentation reviews recent national data on mental health collected in the NHIS and discusses issues involved in collecting sensitive data in a national household survey. Future survey plans for mental health topics are also presented.

D-12. The Epidemiology of Selected Infectious Diseases in the U.S. Population

The prevalence of serologic markers of the hepatitis viruses (A, B, C, and D) are presented from the National Health and Nutrition Examination Surveys (NHANES). Data are also available on the seroepidemiology of toxoplasmosis, rubella, varicella, and HIV. Due

to the extensive data collected in the NHANES, serologic markers can be correlated with a variety of demographic characteristics and health variables.

D-13. Food Security in the United States: An Overview of Federal Activities

With the passage of the Personal Responsibility and Work Opportunity Act of 1996 (P.L. 104–193), the Federal guarantee of providing welfare benefits to all eligible mothers and children was eliminated, and States were allowed to create their own programs. Created by a Federal nutrition monitoring body, the Welfare Reform, Nutrition, and Data Needs Working Group brings together staff who work for Federal and State Governments, advocacy groups, and other nongovernment organizations that are charged with determining whether we are able to monitor the effects of welfare reform on nutrition and health. Members from the group have worked to develop a tool to measure food security in U.S. households (now being included in several Federal surveys) and have also provided technical assistance on the development of a *Healthy People 2010* objective on food security and the planning of various conferences on the topic. Various individuals from the group also worked on a U.S. action plan to reduce food insecurity. The presentation provides an overview of these and other activities related to welfare reform and nutrition monitoring.

D-14. Analyzing Drug Data From the Ambulatory Medical Care Surveys

The National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) are conducted annually to provide comprehensive data on the patient, provider, and visit characteristics of visits to physician offices and hospital emergency and outpatient departments. Data on medications provided or prescribed at ambulatory visits are collected. NCHS maintains a comprehensive drug database on medications mentioned in the NAMCS and NHAMCS, including therapeutic class, generic and ingredient substances, and

prescription status. This presentation provides methodological considerations when using NAMCS and NHAMCS data for analyzing the use of medication therapy in ambulatory medical care.

D-15. The Health Status of the Hispanic Population

This presentation provides an overview of the current health and mortality status of the Hispanic population in the United States, with special emphasis on disparities within and between the Hispanic and non-Hispanic populations. It is based on analysis of data from 1997–2000 National Health Interview Surveys and 2000 vital statistics mortality data. Topics include prevalence of poor health risk factors, health care coverage and utilization, chronic diseases, overall mortality, and leading causes of death.

D-16. Trends in Hepatitis A Virus Using Data From NHANES II and NHANES III

This presentation describes data from the second and third National Health and Nutrition Examination Surveys to look at trends in the seroprevalence of Hepatitis A Virus infection in the United States. Due to the extensive data collected in NHANES, serologic markers can be correlated with a variety of demographic characteristics and health variables.

D-17. Births to Unmarried Women

After rising dramatically from 1940 to 1990, out-of-wedlock childbearing leveled off or slowed its rate of increase in the 1990s through 2002. Recently observed trends differ slightly depending on which of three key measures of out-of-wedlock childbearing is used. Many factors have contributed to the long-term changes as well as the more recent trends, including changes in marriage patterns, sexual activity, contraceptive use, and abortion. In 2002, there were an estimated 1.37 million births to unmarried women, double the number in 1980. The rate of nonmarital childbearing increased rapidly from 1980 to the mid-1990s and has since changed little. Recent increases have been concentrated among women 20 years

of age and over. Teenagers now account for only one-quarter of all nonmarital births, compared with one-half in the mid-1970s. Unmarried mothers tend to have poorer birth outcomes than married mothers because they are disproportionately young, poorly educated, and more likely to be poor. These patterns and variations, based primarily on data from birth certificates, are described and discussed. The experience of the United States is put into context with data on nonmarital childbearing for other industrialized countries.

D-18. Trends in Pregnancies and Pregnancy Rates

During the period from 1980 to 2000, about 10 to 11 percent of women in the childbearing ages (15-44 years) were pregnant in any year. The 2000 total of 6.4 million pregnancies included 4.1 million live births, 1.3 million induced abortions, and 1 million miscarriages. There are approximately 850,000 pregnancies among teens each year in the United States. The teen pregnancy rate in 2000 was 84.5, a rate that declined substantially in the 1990s through 2000, yet still surpasses that of every other industrialized democracy. Trends in pregnancies and pregnancy rates by age and outcome, including patterns for teenagers, are discussed, as well as rates for married and unmarried women. In addition, differences in pregnancy rates, rates by outcome, and lifetime pregnancies among Hispanic and non-Hispanic white and black women are described and interpreted in this presentation.

D-19. Infertility and the Use of Medical Care for Infertility: 1965–2002

The National Survey of Family Growth (NSFG) is the primary source of data on infertility and the use of medical care for infertility in the United States. The NSFG publishes two measures of fertility problems: infertility defined solely for married women, including problems in conceiving a baby; and impaired fecundity, including problems in conceiving or delivering a baby. Trends over the past four decades in these two measures of fertility

problems are described within the context of sociodemographic changes in the population, specifically, the aging of the large baby boom cohorts and the greater prevalence of delayed childbearing. Findings are also presented on the use of medical services for infertility. These data have been collected in the four most recent NSFG cycles (1982, 1988, 1995, and 2002), with an increasing level of detail and clinical/policy usefulness.

D-20. Analysis of Injury Data From the Redesigned National Health Interview Survey

The National Health Interview Survey (NHIS) is a rich source of detailed data on the causes and circumstances of injuries and poisonings in the United States. This presentation includes a history of the section on injury and poisonings and the associated methodological issues. It can also be a more hands-on explanation of the data files and how to use them.

D-21. Trends and Variations in Births to Hispanic Women

The birth certificates of all States and the District of Columbia include items on the Hispanic or ethnic origin of parents. These items were added to the birth certificates beginning in 1978. More than 800,000 babies were born to Hispanic women in 2000, about 1 in every 5 births in the United States. Birth and fertility rates for Mexican, Puerto Rican, Cuban, and other Hispanic women are shown for the years 1978–99 and are compared with rates for non-Hispanic white and black women. While fertility rates for Hispanic women as a group are substantially higher than for other population groups, there are sizable variations in the rates among Hispanic subgroups. Using data from the birth certificates, maternal and infant health characteristics and medical and lifestyle risk factors are compared for babies born to Hispanic and non-Hispanic women. Differences among Hispanic subgroups according to mother's country of birth are also discussed.

D-22. Analyzing Emergency Department Data From the NHAMCS

The National Hospital Ambulatory Medical Care Survey (NHAMCS) is conducted annually to provide comprehensive data on the patient, provider, and visit characteristics of visits to hospital emergency and outpatient departments. The emergency department data set is especially useful for examining data on medical and trauma emergencies such as heart attacks, drug overdoses, chest pains, abdominal pains, and injuries from falls or motor vehicle crashes. Diagnosis, treatment, and outcome patterns for various conditions can be described or modeled. This presentation provides an overview of methodological considerations for analyzing NHAMCS emergency department data.

D-23. Epidemiologic Issues in the Study of Infant Mortality and Low Birthweight

This presentation covers a wide range of research on issues related to infant mortality and low birthweight. Particular emphasis is given to trends in infant mortality at the national, State, and local levels; the use of linked birth and death records to assess maternal factors related to pregnancy outcome; the effects of smoking on pregnancy outcome; and analysis of differentials in pregnancy outcome by race and ethnicity.

D-24. Health, United States

This presentation is a discussion of highlights from *Health, United States*, the annual report on the health of the Nation compiled by NCHS and submitted by the Secretary of Health and Human Services to the President and Congress. *Health, United States* presents national trends in public health statistics organized around four major subject areas: health status and determinants, utilization of health resources, health care resources, and health care expenditures.

D-25. Collection of Race and Ethnicity Data in National Health Surveys

In 1997 the Office of Management and Budget (OMB) revised its standards for the collection of race and ethnicity data throughout the Federal statistical system, also known as OMB Directive 15. The central feature of this revised standard is that it allows respondents to the census and Federal surveys to indicate more than one race for the first time. This promises to have a tremendous impact on the way race and ethnicity data are collected and analyzed in the future. This presentation provides a general background for the changes to OMB Directive 15 and highlights the issues associated with collecting race and ethnicity data from vital statistics records, administrative records, and face-to-face and telephone surveys. Selected data from NCHS data systems are used to illustrate the challenges in tabulating and analyzing data on multiracial population groups.

D-26. Diabetes Incidence and Mortality in a Nationally Representative Cohort

Data from the NHANES I Epidemiologic Followup Study are used to study the risk factors for diabetes incidence with particular emphasis on the role of obesity and socioeconomic status. In addition, the mortality experience of diabetics and nondiabetics is compared. Emphasis is placed on the contribution of diabetes to mortality by cause of death, as well as differentials by sex and other baseline characteristics.

D-27. Do Children in the United States Have Access to Health Care? Data From the National Health Interview Survey

In 2002, almost 4 million (5 percent) U.S. children from infancy to 17 years lacked a regular source of health care, and over 5 million children had at least one unmet need or had delayed medical care because of worry about the cost of care. In this presentation, the most recent data from the National Health Interview Survey (NHIS) are used to show the problems children have in obtaining health care, as indicated by source of care, health care coverage, delays in care, and inability to obtain care.

Analysis and Epidemiology ....

D-28. General Considerations When Conducting Trend Analysis With Data From NCHS

Many NCHS data systems have the potential to examine trends in the prevalence of risk factors, diseases, and health outcomes such as doctor visits or mortality. However, care must be taken when using NCHS data for this purpose. For example, data systems will change over time, rubrics to classify diseases or health-related events may change, or the survey sample design may vary. All of these factors can influence observed trends in the outcomes of interest. This presentation highlights key epidemiologic issues to consider when trend analysis is being conducted.

D-29. The Availability and Use of Data From NCHS Regarding Diabetes

This presentation discusses the current and future availability of data pertaining to diabetes at NCHS. Sources of the data include interviews, physical examinations, health care utilization surveys, and birth and death certificates. The strengths and limitations of these data are described. The presentation also highlights some examples of analyses that used these data. The examples demonstrate how the data can be used for cross-sectional, longitudinal, and trend studies.

D-30. Data Warehouse on Trends in Health and Aging

The Data Warehouse on Trends in Health and Aging is a user-friendly Web-based archive of data on the NCHS Web site— www.cdc.gov/nchs/about/otheract/aging/ trenddata.htm—featuring data on the health and well-being of older Americans. This presentation is an overview of the structure and features of the Data Warehouse, including the data sources, health measures, and methods of using the data. The presentation can include a hands-on tutorial on how to use the site to access and download data. Depending on the interests of the audience, the presentation can focus on specific measures, such as mortality, health status, use of hospitals or nursing homes, or Medicare spending or other topics. Some

data are available at the State level, such as risk factors, health status, mortality, and Medicare spending. The presentation can focus on State-level data, if desired.

D-31. Trends in Herpes Simplex II Using Data From NHANES II and NHANES III

This presentation describes data from the second and third National Health and Nutrition Examination Surveys to look at trends in the seroprevalence of Herpes Simplex II infection in the United States. Due to the extensive data collected in NHANES, serologic markers can be correlated with a variety of demographic characteristics and health variables, including sexual behavior data.

D-32. The Serioepidemiology of Hepatitis C Virus in the United States

This presentation describes data from the third National Health and Nutrition Examination Survey that provide an estimate of the seroprevalence of Hepatitis C Virus (HCV) in a representative sample of the U.S. population. These data are the first estimates of HCV infection in the United States for this recently identified virus. Due to the extensive data collected in NHANES, serologic markers can be correlated with a variety of demographic characteristics and health variables, including sexual behavior data.

D-33. Immunity to Tetanus in the United States, NHANES III

This presentation provides an estimate of tetanus immunity levels in the United States using data from NHANES III. Despite the availability of effective vaccines against tetanus since the 1940s, NHANES III confirmed the existence of substantial gaps in tetanus immunity, particularly among the elderly who were either never vaccinated or had lost the protective tetanus antibody due to waning immunity. Risk factors for lack of immunity are described using the extensive demographic and health data collected in NHANES.

D-34. Profile of the Older U.S. Population: Recent Trends and Data Sources

A profile of the demographic, health, and socioeconomic status of the U.S. older population is presented in this talk. Using data from *Older Americans 2000: Key Indicators of Well-Being* and from the Data Warehouse on Trends in Health and Aging (www.cdc.gov/nchs/agingact.htm) recent trends in the well-being of the elderly are discussed. Various indicators of well-being are shown (e.g., the percentage of the older population in poverty, disability rates over time, and out-of-pocket health care expenditures). Trends in health and use of health care services such as hospitals and nursing homes are highlighted. Also, sources of data on the elderly and how to access them are described.

D-35. Adolescent Health Indicators: Findings From the Adolescent Health Chartbook

Adolescence is a period of accelerated growth and change, bridging the complex transition from childhood to adulthood. Young people experience profound biological, emotional, intellectual, and social changes, and the patterns of behavior they adopt may have long-term consequences for their health and quality of life. Measurements of health status, access to care, reproductive health, risk behaviors, and population demographic variables during the transition from childhood to adulthood are presented. Many of the health status measures are shown by single year of age or by 2- or 3-year age intervals to highlight the changes that occur in health as adolescents move through this important developmental period. Disparities in race, ethnicity, and socioeconomic status and gender differences are also presented.

D-36. Injury Data From NCHS

Injury is recognized as one of the major public health problems currently facing the United States. NCHS collects morbidity and mortality data related to injury. This presentation discusses the different data collection mechanisms and the variables used to measure injury.

D-37. Infant Mortality in the United States: An Introductory Explanation

Data from a variety of NCHS data sources will be used to provide an overview of U.S. infant mortality. The presentation will explore the contribution of birthweight distribution and birthweight-specific mortality to a population's overall infant mortality rate. The influence of parental factors on low-birthweight and birthweight-specific mortality will be explored. All of those factors will be used to examine the marked racial and ethnic infant mortality differences that persist in the United States.

D-38. Trends in Delayed Childbearing

American women have been postponing marriage and childbearing to an unprecedented extent since the early 1970s. Because birth rates for women in their twenties (the principal childbearing ages) have been very stable, and rates for teenagers have fallen significantly, relatively large proportions of women are still childless at age 30. Numbers and rates of first births for women in their thirties have doubled, tripled, and quadrupled since 1970. For example, the first birth rate for women aged 30–34 in 2002 was 27 per 1,000, compared with 7 in 1970. Trends in first-birth rates by age of mother are presented for 1970–2002. The unique sociodemographic composition of women who postpone motherhood is described. Also discussed are differentials by age of mother in various medical and lifestyle risk factors and infant health measures and the impact of current population patterns on possible future trends in delayed childbearing.

D-39. Teen Sexual Activity, Contraceptive Use, and Pregnancy

The pregnancy rate among teenagers in the United States, at approximately 85 per 1,000 teens aged 15–19, surpasses that of every other industrialized democracy. The National Survey of Family Growth (NSFG) is a principal source of estimates of the antecedents to teen pregnancy: teen sexual activity and contraceptive use among females. The NSFG interviewed women aged 15–44 of all marital

statuses in 1982, 1988, 1995, and 2002, thus allowing examination of trends in pregnancy risk behaviors among teens across two decades. In addition to tracking the incidence, the NSFG allows examination of other aspects of sexual activity, including whether first sex was voluntary; age and other circumstances of first sex; selected other male sexual partners; number of sexual partners within specified time frames; current sexual activity and frequency; contraceptive use ever, and at first and last intercourse; formal instruction on sex education topics; and wantedness of pregnancies. A rich array of background characteristics is available, enabling detailed analyses of the processes by which teens become sexually active and the circumstances surrounding sexual activity.

D-40. Trends in Risk Factors of the Aging Population of the United States

The Data Warehouse on Trends in Health and Aging available on the Centers for Disease Control and Prevention's Web site—www.cdc.gov/nchs/agingact.htm—can be used as a tool to monitor changes in the health status of the aging population of the United States. In this presentation, we look at risk factors for disease, such as obesity, cigarette smoking, exercise, and immunization. These risk factors come from a variety of surveys conducted by CDC and NCHS. These trends are examined over time and compared with the trends in rates of chronic disease among the elderly. We will examine these trends by age, sex, race, and Hispanic origin for the years 1985–99. The presentation will also show how to display these results graphically using the Beyond 20/20 software. Other uses of the Data Warehouse will be examined, including trends in mortality, health care utilization, and health care expenditures. The user will learn how to import and export the trend data to be used in other applications.

D-41. Do Working-Age Adults in the United States Have Access to Health Care? Data From the National Health Interview Survey

In 2002, over 30 million (11.3 percent) adults aged 18–64 in the United States had unmet medical needs. In this presentation, data from the National Health Interview Survey (NHIS) are used to show the problems working-age adults in the United States have obtaining health care. The NHIS uses a nationally representative sample of the civilian noninstitutionalized population of the United States. This presentation will examine selected access indicators by selected demographic variables with the most current NHIS data available. Access indicators considered include regular source of medical care, insurance coverage, and health care issues such as delaying medical care due to cost.

D-42. Childlessness in America

The postponement of childbearing among younger women in the recent past has resulted in the current pattern of larger proportions being childless at older ages. Among women nearing the end of the childbearing period, those aged 35–39, the percentage childless rose from 9 in 1970 to 18 in 1998. The National Survey of Family Growth (NSFG) allows examination of the phenomenon of childlessness in a particularly meaningful way. Because it includes information on women's and their partners' biological impediments to childbearing and information on expectations for future births, it is possible to distinguish those who have or expect no children even though they are biologically capable of reproducing. The NSFG also includes measures of the subjective desire for children. These measures have been available in most of the six cycles of the NSFG, allowing trend analysis over a substantial period of time.

D-43. Women's Health Overview: National Data Available From NCHS That Address Health Issues of Adult Women

This presentation provides an overview of the NCHS data systems and how they can be used to address questions of health and health care utilization among women. Each data system is described in terms of how the information is collected, what information is obtained, and recent improvements in the data collection. Examples of investigations of the health of

women using each of the data systems are provided, such as use of hormone replacement therapy, the associations with disease outcomes, breast cancer mortality, prevalence and health services use, and osteoporosis.

D-44. Reaching the Media With the Results of Your Research

Most Americans and even most policymakers receive their health news through the media—television, newspapers, and magazines. However, researchers and scientists are often more adept at communicating their findings through the scientific literature than in working with a reporter to announce or explain their results. This presentation provides an overview of the media and its requirements. It covers how to find the media, how to promote a story, how to work better with the press, how to ensure better coverage, and how to prepare for media interviews.

D-45. Overweight Prevalence—Evidence From NHANES

The goal of this presentation is to create an awareness of a significant nutrition-related problem of clinical and public health importance using data on overweight and obesity from the NHANES. Descriptive statistics are provided on the current prevalence of overweight in American youths and adults, and trends in overweight over time are examined based on nationally representative data from the NCHS Health Examination Surveys.

D-46. Use of Inappropriate Prescription Drugs Among Elderly Americans

There is currently a great deal of interest from both the medical and the health care policy communities on the use of prescription drugs by the elderly. This interest covers a range of issues, including drug underutilization, overutilization (polypharmacy), and the costs and quality of drug prescribing. This presentation describes the prevalence of and risk factors for the use of potentially inappropriate prescription medications among elderly (age 65 and over) Americans. The

analysis used explicit criteria for potentially inappropriate drugs for elderly persons and data from three national surveys: the Medicare Current Beneficiary Survey, the National Ambulatory Medical Care Survey, and the National Hospital Ambulatory Medical Care Survey.

D-47. Data on AIDS Available From NCHS

In this presentation, the available data on AIDS are described. A discussion of the problems related to the collection and interpretation of the data is included.

D-48. Estimates of Healthy Life Expectancy and Associated Health Care Costs for the Aged

As the percentage of the U.S. population age 65 and over increases, it is important to estimate not only total life expectancy past age 65, but also how much of the remaining life will be spent in good health. This presentation will discuss the latest findings on how much of elderly persons' remaining years will be spent in good health and how much in a functionally limited state in the community or in a nursing home. The results are analyzed by gender, race, age, and beginning health state. The health care costs associated with each health state will be presented by type of service.

D-49. The Mental Health Status of the Aging Population: A Comparative Analysis

This presentation discusses different methods and questions used to measure mental illness in community-based surveys, such as the National Health Interview Survey and the Health and Retirement Survey. It explains the problems inherent in case identification and measurement of various mental disorders and discusses the special difficulties associated with measuring mental illness among the elderly. Using major depression as an example, prevalence rates from three different surveys and three different instruments are compared. Possible reasons for observed differences are discussed.

Analysis and Epidemiology ....

D-50. The 2000 CDC Growth Charts

The Centers for Disease Control and Prevention (CDC) Growth Charts, released in May 2000, consist of revised versions of the growth charts developed by NCHS in 1977 and the addition of the Body Mass Index (BMI)-for-age charts. This presentation describes the science behind the development of the charts and the rationale for including BMI-for-age.

D-51. Adult Health Behaviors: Smoking, Alcohol, Physical Activity, and Obesity Data From the NHIS

The health behaviors of adults are currently of considerable interest to public health experts, and the National Health Interview Survey (NHIS) features an array of indicators to measure such behaviors. For example, questions on smoking and drinking behaviors, in particular, have been included periodically in the NHIS almost from the beginning of the survey in 1957 (although the questions have been modified over the years). This presentation provides data from the NHIS and can include, in addition to findings from the data, the rationale behind those questions that are asked annually in the NHIS as opposed to those that are asked periodically. The presentation can also cover trend data and/or associations between adult health behaviors and other health outcomes.

D-52. In-House Data Analysis in a Statistical Agency

Government statistical agencies are charged with collecting, analyzing, and disseminating data. Each agency must consider the extent to which it can devote human and other resources to data analysis. This talk presents a case for devoting significant time and other resources to analysis of survey data by staff within the statistical agency.

D-53. Monitoring Key Health Indicators—Early Data From the NHIS

The National Health Interview Survey (NHIS) serves as a primary source of information on the health status and health care utilization of the household population of the United States. In 1997, the NHIS was redesigned to include many key measures of health currently needed by public health workers and health policymakers. This presentation focuses on a data dissemination mechanism, the Early Release Program, which is used to monitor the changes over time in leading health indicators and to provide timely estimates that are available on the NCHS Web site. The presentation will cover how the key measures were initially selected and defined. The key health measures that are monitored include health insurance coverage, usual place of medical care, unmet health needs, influenza and pneumococcal vaccinations, obesity, regular leisure-time physical activities, current smoking, excessive alcohol consumption, HIV testing, general health status, personal care needs, serious psychological distress, diagnosed diabetes, and asthma episodes. Timeliness of release of these results is possible by using partial-year NHIS data. New measures will be added as data become available and in response to changing data needs.

E. Information Technology

E-1. Mortality Medical Indexing, Classification, and Retrieval System

Mortality Medical Indexing, Classification, and Retrieval (MICAR) is an automated medical coding system designed to accept medical terms as input principally in natural language text via a key-entry operator. It also has the capability of assigning the conventional *International Classification of Diseases* (ICD) codes to these medical terms and can store and retain for retrieval the natural language text and the ICD codes.

E-2. Survey Statistics Automation

The National Center for Health Statistics (NCHS) is developing a completely automated system from source data collection to final report dissemination. Data collection, editing, processing, analysis, report preparation, publishing, and dissemination will be accomplished through a system of portable and fixed microcomputers networked with a large mainframe computer. The system will also allow survey instrument design and processing by microcomputer.

E-3. Statistical Export and Tabulation System (SETS) Data Retrieval Software

SETS is a unique collection of programs that enable the personal computer user to easily access data formerly available only on a mainframe computer. This software was developed by NCHS for distribution of survey data on CD-ROM. The SETS software can be used on virtually any data set. The data applications produced with this kit may be distributed without licensing fees. This presentation includes a discussion on the benefits of using the SETS software for data retrieval and a demonstration of the capabilities of the SETS software, which includes browsing data and documentation, generating tables and queries, creating data subsets, and exporting data from SETS to EPI Info, SAS, SPSS, and Excel.

E-4. Applied Information Technology (IT) Research Issues for Statistical Agencies and a Digital Government: A National Science Foundation Initiative

NCHS and other Federal statistical agencies are partnering with the National Science Foundation's Digital Government Program to support applied IT research with university researchers. Ongoing research areas include new authoring and computer-assisted interviewing systems, tabular and graphical displays of complex data, data access methods, secure access systems, and mapping systems. This presentation will discuss research areas currently being addressed and future applied IT research needs of Federal statistical agencies.

E-5. Public Health Informatics on the National Health and Nutrition Examination Survey

This topic will provide an overview of the information technology used to support the collection and reporting of data collected in the National Health and Nutrition Examination Survey (NHANES). NCHS conducts NHANES to monitor trends in the prevalence, awareness, treatment, and control of selected diseases including sexually transmitted diseases (STDs), risk behaviors; environmental exposures; nutrition; and other public health issues. The information technology employed on NHANES supports in-home interviews and comprehensive medical examinations in mobile examination centers (MECs). The technology integrated into NHANES allows for near-real-time quality assurance and control, survey management, analysis, data dissemination, and reporting of examination findings, including sensitive information, to survey participants.

E-6. Quality Assurance/Quality Control on the National Health and Nutrition Examination Survey

This topic provides an overview of a comprehensive, continuous, and tightly integrated quality assurance/quality control (QA/QC) program currently in place for the National Health and Nutrition Examination Survey. QA/QC is one of the most important aspects of this study because the integrity of the conclusions drawn by the study is in large part determined by the quality of the data collected. There are two basic components of insuring data integrity: quality assurance and quality control. QA consists of those activities that take place before data collection or in improving and refining data collection; QC consists of those activities that take place during and after data collection. Manual

development, training/retraining before and during the survey, and certification of examiners and feedback are part of the QA process. Component completion rates; validation of household interviews; contractor and subcontractor debriefings; examiner performance, reliability, and validity; MEC examination flow; and equipment performance are part of the QC process.

E-7. **Aspects of Metadata Collection Related to the National Health and Nutrition Examination Survey**

This topic will cover the NHANES metadata collection, storage, retrieval, and standards. Aspects to be discussed include program standards, historical metadata from earlier National Health Examination Surveys and NHANES surveys, systems developed to capture and access the metadata, and applicability of emerging standards such as Government Information Locator Service for the development of metadata clearinghouses.

E-8. **Collection of NHANES Quality Assurance and Control Data Using Personal Digital Assistants**

This topic will cover electronic capture of the quality assurance and quality control data in the National Health and Nutrition Examination Survey mobile examination center (MEC) using personal digital assistants. Considering the number of field visits, the cost of travel, and the unavailability of aggregated data resulting from these field visits and its value to the quality of the data collected, a research and development project was conducted to assess whether small mobile devices such as a personal digital assistant could be used to capture the checklist information for data analysis and historical purposes. The objectives of this effort were as follows:

- Determine which device(s) are most appropriate for project.
- Develop an integrated architecture that allows for electronic field data capture and extraction, transformation, and loading of checklist data to the NHANES database.
- Determine the strengths, limitations, and weaknesses of this solution.
- Determine whether other possible applications exist for the use of these devices in source data collection.
- Lay the groundwork for a more ambitious effort in the future that considers wireless transmission of field-collected checklist data.

F. Other

F-1. A Career in Statistics With the National Center for Health Statistics

In this presentation, a description is given of the types of statistical problems that a statistician at the National Center for Health Statistics (NCHS) is often asked to solve. Most of the problems deal with the subject areas of sampling and survey design. The discussion includes methodological topics that vary from speaker to speaker, and it may relate to surveys of institutionalized or noninstitutionalized individuals, minority populations, or health care establishments. Examples of topics include optimum recall periods, use of the Yellow Pages to supplement sampling frames, correcting for undercoverage bias in a random-digit-dialed survey, and designing a Hispanic health and nutrition survey. The presentation is intended primarily for students in statistics who are contemplating different career choices, including that of survey designer.

F-2. Minorities in Statistics

Minorities, particularly black people, Hispanics, and Native Americans, are underrepresented in the field of statistics. Special efforts are being made at NCHS and other Federal agencies to inform minorities of the advantages and excellent opportunities relating to statistical careers. In this presentation, topics of particular interest to minorities are discussed, including the study and analysis of racial and ethnic statistics in such areas as labor, income, and health characteristics.

F-3. Geography Careers in Public Health

Geographers can make important career contributions to the Centers for Disease Control and Prevention and the field of public health. With the increasing demand for spatial analysis at all levels of government and a growing emphasis on multidisciplinary approaches to problem solving, geographers need to take a more active role in this dynamic area. In this presentation, a variety of issues are delineated to better prepare geographers for occupational access to public health. Curriculum strengthening, minority job opportunities, employment strategies, and the uses of spatial statistical tools in public health applications are discussed.

F-4. For Information Professionals: Where Do the Numbers Come From?

This presentation for librarians and other information resource providers will take an in-depth look at the surveys NCHS employs to gather the information used in its statistical products. Descriptions of surveys, frequency, and types of data collected are discussed.

F-5. For Information Professionals: Overview of NCHS Information Resources

This presentation is an overview of NCHS information resources for librarians and other information resource providers. Current information products will be described as well as the manner in which each product can be accessed. Issues of currency, confidentiality, and information use will also be discussed.

F-6. For Information Professionals: Exploring the NCHS Web Site

This presentation for librarians and other information resource providers takes an in-depth look at the NCHS Web site. Navigation and search techniques are emphasized.