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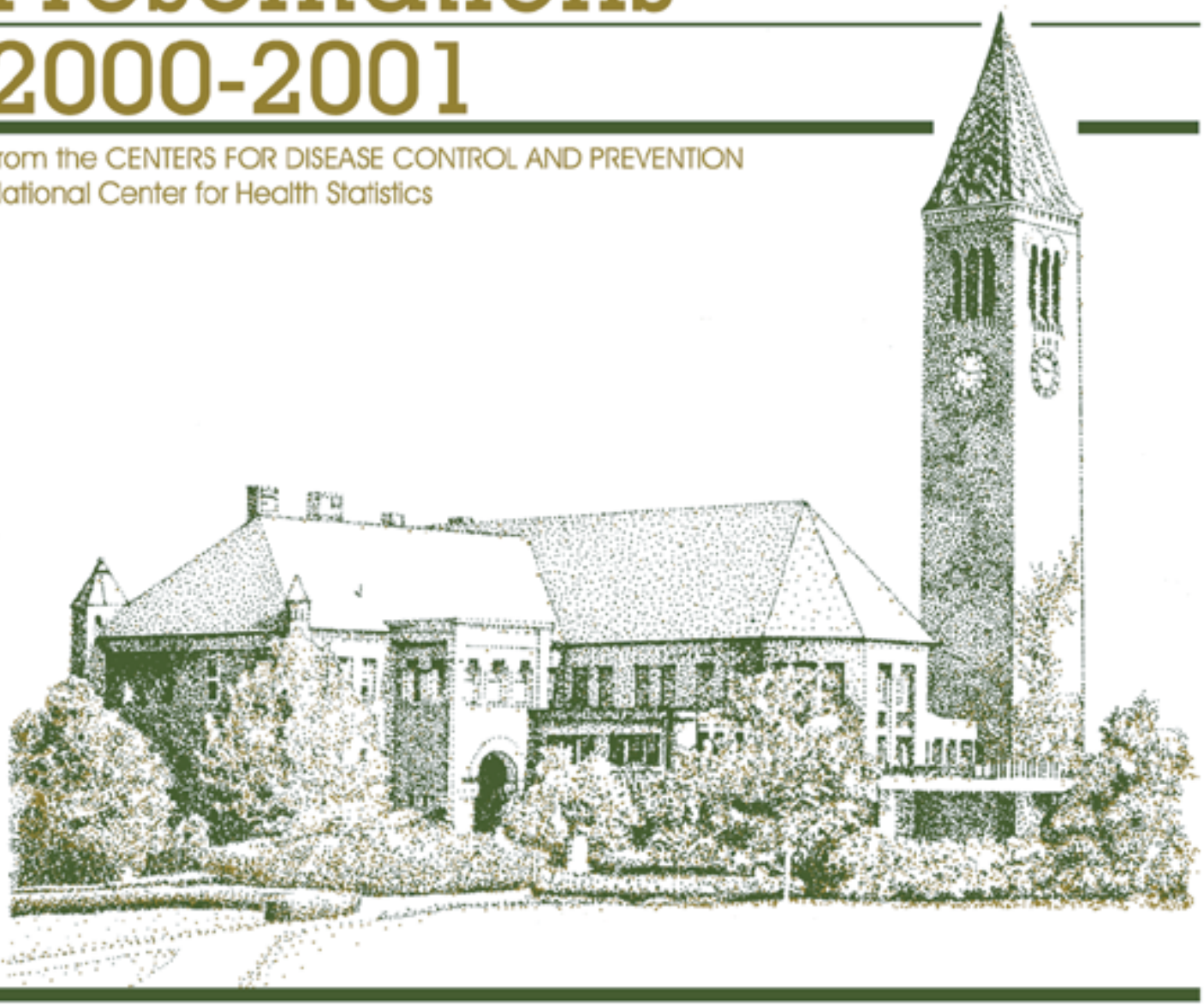
Catalog of University Presentations 2000-2001

From the CENTERS FOR DISEASE CONTROL AND PREVENTION
National Center for Health Statistics



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

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

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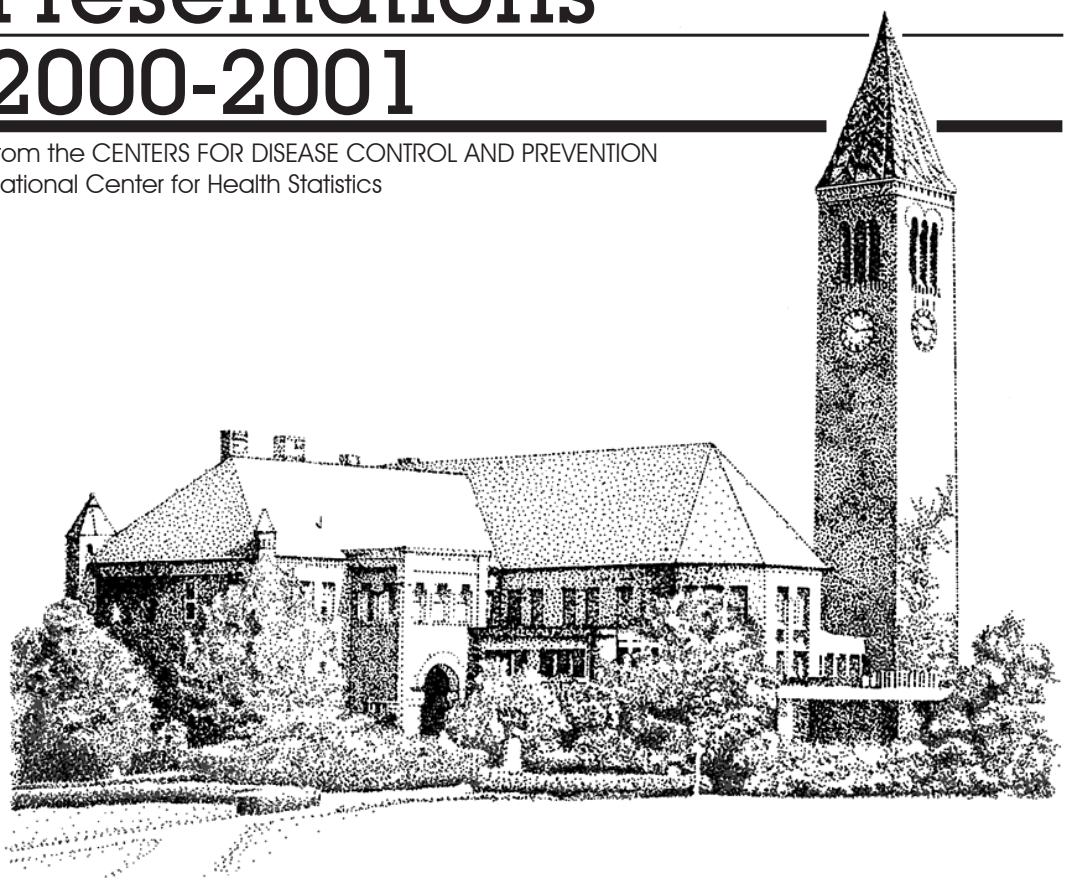

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

Hyattsville, Maryland
September 2000

DHHS Publication No. (PHS) 2000-1302

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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
6525 Belcrest Road
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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 17th year. The program includes presentations and lectures by NCHS staff on topics ranging from our families of survey and statistics programs to those describing innovative methodological and analytical research developed at NCHS, to topics as current as today's news. 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, overweight prevalence, firearms in American households, plus many others. In addition, other topics provide detailed information on how to access and use our data sources. I am particularly excited about the NCHS Research Data Center (RDC). The RDC, now about a year old, offers researchers the opportunity to access internal 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.

There is 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 2000-2001 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 the National Center for Health Statistics

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-ROM's, diskettes, and other forms of data release are described, as well as guides to NCHS data and methods of identifying available data on specific topics.

A-3. The Statistical Research and Survey Methods Program of the National Center for Health Statistics

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 serve as the primary sampling units for the NCHS establishment surveys. The achievements of the integrated design program over the past decade and the research being planned for redesigning NHIS after the 1990 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 National Nutrition Monitoring and Related Research Program.

A-6. The Research Data Center (RDC)

The National Center for Health Statistics (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) (the NSFG contextual data files consist of the survey data and about 1,300 contextual variables and is available only through the RDC), and others.

Researchers may use the files to merge other contextual data from the Census Bureau, the Area Resource File, or other data collected or provided by the researcher (air pollution data; State, county, or local laws or ordinances; reimbursement policies; medical facilities; etc.) 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 the National Center for Health Statistics

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. Minority Health Statistics Grants Programs

The Disadvantaged Minority Health Improvement Act of 1990 (P.L. 101–527) authorized the NCHS to establish an extramural grants program to improve minority statistics. Grants are authorized for the support of special studies or surveys to fill in gaps where national surveys cannot provide sufficient data, analysis of existing data, and research to improve methods for obtaining information on racial and ethnic subpopulations. This presentation provides an overview of the grants program and future plans for expanding its research agenda.

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

The Healthy People 2000 objectives for the Nation encompass a broad spectrum of public health issues, a few of which are nutrition, alcohol and drug use, violence, unintentional injuries, oral health, cancer, HIV infection, and surveillance and data systems. The next generation of health promotion/disease prevention objectives (Healthy People 2010) are being developed. 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. Evaluating a Government Website in the Cognitive Laboratory

The National Center for Health Statistics (NCHS), Office of Research and Methodology, has conducted studies of the usability of the NCHS Web site. This presentation describes experiments that have been done recently to learn more about how users navigate and interpret Web sites.

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 the National Center for Health Statistics

Review of need for statistical, legal, and ethical factors in the development of confidentiality in data collection programs at NCHS. Description of 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. Impact of recent and proposed legislation and changes in institutional relationships is discussed.

A-13. Maternal and Child Health Research Efforts at the National Center for Health Statistics

NCHS offers a number of data systems which 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), and 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-14. The National Health and Nutrition Examination Survey: 1999 and Beyond

The content of the latest National Health and Nutrition Examination Survey, 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).

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 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 in 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 the impact of proposed changes in Medicare and Medicaid and the accelerating shift toward managed care on the health status of the elderly and their patterns of health care utilization. Like the LSOA, the LSOA II is scheduled to consist of four waves of interviews: 1994/1995, 1997, 1999, and 2001. The first two have been completed. The purposes, procedures, and data elements are described in this presentation.

B-3. Development and Operation of the National Health Provider Inventory

The purpose and methodology used to develop the National Health Provider Inventory are reviewed. The presentation also includes a discussion of the development and content of the data collection instruments, data collection procedures, data processing procedures, and dissemination of the data.

B-4. Development and Operation of the National Nursing Home Survey

The purpose and methodology used to develop the National Nursing Home Survey are discussed. Also included is a description of data collected to provide estimates of the Nation's nursing homes according to their characteristics, costs, residents, and staff. The development and content of the data collection instruments, procedures, processing, and dissemination of the data are also discussed.

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 four decades, with emphasis on innovations in Cycle 5 (fielded in 1995). In addition to showcasing the content and analytic potential of Cycle 5, particularly the new event history data, possible future developments of the survey are explored.

B-8. Use of Data From the National Center for Health Statistics 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 analyses and gives examples of how the data can be used.

B-11. The National Survey of Ambulatory Surgery

The National Survey of Ambulatory Surgery was implemented in 1994 and data first became available in 1996. This presentation covers background, basic design components, data processing, variables collected in the survey, and data dissemination activities.

B-12. Development and Operation of the National Home and Hospice Care Survey

The purpose and methodology used to develop the National Home and Hospice Care Survey are discussed. Also included is a description of data collected to provide estimates of the Nation's home health agencies and hospices. These data are described according to characteristics of the agencies, resident characteristics, costs, and staff. The development and content of the data collection instruments, procedures, processing, and dissemination of the data are also discussed.

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

The practical field operations of the NHANES study will be reviewed with a focus on current methods employed to assure 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 results 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. Racial and Ethnic Differences in Health: Evidence From NHANES

The data from the National Health and Nutrition Examination Surveys have been used extensively to assess the patterns of differences in health among the large racial and ethnic groups in the U.S. and the causes for these differences. A review of the important findings based on NHANES examination and biologic specimen data, including infectious diseases, diabetes, obesity, and other common conditions, will be presented.

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: its origins and history, its design and content, its analysis and dissemination, and its 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, State and local area data, and release of microdata on the World Wide Web.

B-21. The National Immunization Survey

The National Immunization Survey (NIS) collects information on the immunization coverage of children 19 months to 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 National Immunization Program. This presentation can include recent findings, background on the survey design, methodological issues, and questionnaire content.

B-22. Statistical Methods for Analysis of the NHANES I Epidemiologic Followup Study (NHEFS): Effects of the Complex Survey Design

This presentation addresses the effect of survey design in analyzing the NHEFS. The effect of the survey design on parameter estimates from Cox proportional hazards models and their standard errors are discussed. Survey design effects are measured under four analysis options: 1) ignore the complex survey design, 2) incorporate only the stratification and clustering, 3) incorporate only the sample weights, and 4) incorporate stratification, clustering, and sample weights. Additional approaches considered are trimming the sample weights to reduce their variability, stratifying the analysis on variables used in the sample design, and including variables used in the design as covariates in the model.

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.

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 the Center'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. Quality of Data Collection in the National Hospital Discharge Survey

Data have been collected by means of the National Hospital Discharge Survey (NHDS) on a continuing basis since its inception in 1964. These data are based primarily on information abstracted from a sample of patient medical records. The quality of this data collection operation is measured by independently reabstracting a subset of the originally sampled records. In recent years, the types of source documents used to complete the NHDS abstract form have become more varied. Thus it has become more difficult to measure the quality (in terms of accuracy and completeness) of the information. This presentation contains findings of a special study designed to evaluate the effects of expanded source use on the quality of abstracted NHDS data.

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 is 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 (PSU's) 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 Surveillance Opportunities With Geographic Information Systems (GIS)

Digital cartography may well become one of the more important technologies in health surveillance in the 1990's. 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 lecture 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 Randomized Response Technique for Collecting Data

The randomized response technique can be used to produce estimates of sensitive behavior. This presentation is a discussion of the technique in general, a specific application in the National Survey of Family Growth to produce estimates of women having abortions, problems experienced, and results.

C-12. Question, Questionnaire, and Survey Design in the NHIS

The 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. Evaluating the Usability of the Internet for Disseminating Health Statistics

The development of the Internet has fostered studies of the potential for collecting and disseminating public health statistics via this rapidly evolving medium to a wider audience. This presentation explores some of the issues involved in these studies and describes the outcome of usability tests of the NCHS Web site done in the NCHS Questionnaire Design Research Laboratory. Participants may be asked to complete a brief survey on the Web site as preparation for attending the seminar.

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

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 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 Uses

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 the National Center for Health Statistics (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 will be 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. Impact of Written Informed Consent in a National Interview Survey

Recently, the NCHS Human Subjects Review Board requested procedures be implemented for obtaining written consent from respondents taking part in the National Health Interview Survey (NHIS), an ongoing face-to-face national household survey that interviews 45,000 or more respondents annually. The signature indicates the respondent has been informed of the nature of the survey and has consented to be interviewed. Before procedures were implemented nationwide, a pilot study was conducted to evaluate the impact of the signed consent procedures on maintaining confidentiality, field efficiency and effectiveness, and data quality. Presenter(s) will summarize and discuss data obtained from semistructured

interview notes for 1,100 assigned cases, semistructured personal interviews conducted with each of the 30 field staff, field observations of initial interviews and followup refusal conversions, and group telephone debriefings.

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. The Center's national household and establishment surveys were originally designed as independent surveys. This presentation is a discussion of the progress being made in the Center's program for integrating the designs of the Center's 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. Also discussed are specialized uses of life tables, including survival analysis, multiple decrement life tables, and cause-elimination life tables.

C-21. Use of the Balanced Replication Technique to Estimate Variances From Complex Surveys

The Balanced Repeated Replication (BRR) for variance estimation is one of the most important advances in sample survey technology in recent years. This presentation includes a discussion of the important steps in the development of this technique and current uses of the method. The efficiency of the BRR estimation is compared with that of other commonly used estimates.

C-22. Collection of Sensitive Data in the 1995 National Survey of Family Growth

In the 1995 National Survey of Family Growth (NSFG), two primary strategies were used to improve the reporting of sensitive events among women of reproductive age: 1) a $20 cash incentive was given to all respondents; and 2) a small part of the interview was conducted with a self-administered technique called audio computer-assisted self-interviewing (Audio CASI). Experience with the 1993 NSFG Pretest 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 sexual intercourse. This presentation will review past evidence as well as results of using these innovative strategies in the 1995 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 way 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 (for example, 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 (for example, 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. Combining a Technical Review of Questionnaires With Identification of Cognitive Issues

The Questionnaire Design Research Laboratory develops and tests questionnaires in a laboratory setting using the concepts and techniques of cognitive science. In addition to conducting cognitive interviews, which focus on the internal processes by which individuals

respond to survey questions, critical ''armchair'' reviews of instruments are performed. These reviews combine the traditional questionnaire design process with identification of cognitive issues. This presentation describes the kinds of cognitive factors that can be identified in a critical review without the benefit of actual cognitive interviews. These include judgments required to answer questions, recall problems, complexity of tasks imposed on respondents, vagueness, and terminology problems.

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 NHIS, NHANES, and NMES.

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

The software package SUDAAN 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. Evolution of the Cognitive Aspects of Survey Methodology (CASM) Interdiscipline

The cognitive model of the question/response process in surveys has stimulated research in questionnaire design both in academic settings and government laboratories since 1983. This presentation describes: 1) how the interdiscipline emerged, 2) its initial driving goals, and 3) future directions. A significant component of the presentation will be the videotaped vignettes from oral histories of some influential participants in the interdiscipline. This presentation will also focus on the research agenda for future CASM research.

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. Methodological Research Sponsored by the Minority Health Statistics Grants Program

This presentation will provide highlights from NCHS extramurally funded projects focusing on the development of new and innovative methodological approaches to surveying hard-to-reach populations.

C-30. The Use of Remuneration (Monetary Incentives) in Health Surveys

Although most sample surveys conducted by the Federal Government are based on unpaid voluntary participation, monetary or gift incentives for participation may be justified for certain types of household- and establishment-based surveys in order to increase participation rates, encourage accurate recordkeeping, and to minimize data collection costs. In addition, in order to maximize response rates, remuneration may be justified for health surveys that involve a physical

examination and the drawing of a blood sample. This presentation highlights some major institutional- and population-based surveys that successfully use or have used remuneration to increase survey response and data quality. The surveys reviewed include special features such as long interviews, the maintenance of records such as health diaries or event histories, sensitive questions, and nonstandard survey data collection locations or procedures.

C-31. Doing the National Health Interview Survey: Questionnaire Design, Fieldwork Procedures, Quality Control, and Data Processing

Like any large, high-quality national survey, the annual National Health Interview Survey (NHIS) doesn't just happen. Doing the NHIS takes 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 final analyzable data that meet that need. Case studies illustrate the problems that surveys must solve, such as converting from paper questionnaires to computers, 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.

D. Analysis and Epidemiology

D-1. Decreasing Hospital Use in the 1990's

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. Examining Change in a Cohort of Elderly Americans

Providing for an increasing number of older people is one of the great challenges facing the public health establishment today. Knowing how a cohort changes with age is critical for developing good policy. This presentation provides data on the aging of one cohort from the Longitudinal Study of Aging and suggests other research that could be based on these data.

D-3. 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 to look at trends in the seroprevalence of HBV 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-4. Multiple Births: Trends and Outcomes

During 1980 to 1996, the number of twin births rose 56 percent (from 68,338 to 106,689) and the twin birth rate by 37 percent (18.9 to 25.9 per 1,000 live births). The number and rate of triplet and other higher order births has climbed even more dramatically; the number from 1,104 to 5,939 and the higher order multiple birth rate from 37.0 to 152.6 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 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 will be discussed and interpreted.

D-5. 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 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 will be presented and discussed.

D-6. 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 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-7. Years of Healthy Life

The first goal of Healthy People 2000 is to increase the span of healthy life for Americans.

To monitor this goal and the related objectives on an annual basis, the National Center for Health Statistics developed a specialized measure that combines data from the National Health Interview Survey and vital statistics. The measure is also being adapted for use at the State level, combining data from the Behavioral Risk Factor Surveillance System and vital statistics. This presentation includes a description of the methodology, trend data, and a discussion of methodological issues associated with monitoring the objective.

D-8. 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-9. Changes in Hospital Care for Childbirth

Changes in the care provided to women hospitalized for childbirth during the 1980's and 1990's are examined using data from the National Hospital Discharge Survey. Rates of cesarean deliveries increased until the late 1980's, 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 1980's and 1990's. 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 one day or less.

D-10. Analytic and Epidemiologic Research Sponsored by the Minority Health Statistics Grants Program

This presentation provides lessons learned by Minority Health Statistics Grants Program grantees in designing analytic studies of racial and ethnic populations.

D-11. America's Children: Key National Indicators of Well-Being

In order to foster coordination of the data collection and reporting on children, the National Center for Health Statistics 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-12. 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 will review recent national data on mental health collected in the NHIS as well as discuss issues involved in collecting sensitive data in a national household survey. Future survey plans for mental health topics will also be presented.

D-13. 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-14. 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 is eliminated and States are 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 the Federal and State governments, advocacy groups, and other nongovernment organizations that are charged with determining whether or not 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-15. 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. The National Center for Health Statistics 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-16. Review of Federal Standards for Collecting Data on Race and Ethnicity

The Office of Management and Budget (OMB) Statistical Policy Directive 15, ''Race and Ethnic Standards for Federal Statistics and Administrative Reporting,'' which sets forth the racial and ethnic categories to be used in the collection and presentation of data by all Federal agencies, is currently under review. This presentation discusses the issues underlying the concerns about the adequacy of the current standards, the suggestions for changes, the research conducted to evaluate the feasibility and impact of implementing the suggestions, and the implications of the findings for NCHS data systems.

D-17. 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 HAV 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-18. Data From the NHIS on Selected Year 2000 Objectives

The NHIS includes questions each year to help track the National Health Objectives for the Year 2000. Recent topics have included cancer risk factors, tobacco use, environmental health, occupational safety and health, heart disease and stroke, clinical and preventive services, mental health, oral health, family health, firearm safety, nutrition, and physical activity and fitness. This presentation explains how questions to measure progress toward the

objectives were developed, tested, and implemented, and also presents selected analyses of the data.

D-19. Births to Unmarried Mothers

The risk and hazard of nonmarital childbearing have increased in recent years as American women are becoming sexually active at earlier ages and marrying later. One of every three births in America is to an unmarried mother. In 1992, there were 1.2 million births to unmarried women, almost double the number in 1980. The rate of nonmarital childbearing has increased rapidly since 1980, with the recent increase most pronounced for white women aged 20 and older. Still, rates of nonmarital childbearing are highest among black women and the overwhelming majority of all teenage mothers—70 percent—are not married. 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 on data from birth certificates are described and discussed.

D-20. Trends in Pregnancies and Pregnancy Rates

During the period from 1980 to 1992, about 11 percent of women in the childbearing ages of 15–44 years were pregnant in any year. The 1992 total of 6.5 million pregnancies included 4.1 million births, 1.5 million abortions, and 900,000 miscarriages and stillbirths. About five of eight pregnancies in the United States end in live birth, two of eight end in abortion, and one of eight end in miscarriage or stillbirth. The abortion rate declined by 12 percent from 1980 to 1992, partly due to the decline in the number of women 18–29 years, the ages when abortion rates are highest. Trends in pregnancies and pregnancy rates by age and outcome are discussed. 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-21. Infertility and the Use of Medical Care for Infertility: 1965–95

The National Survey of Family Growth 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 is defined solely for married women and captures problems in conceiving a baby, and impaired fecundity is defined for all women and includes problems in conceiving or delivering a baby. Trends over the past three 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 three most recent NSFG cycles (1982, 1988, and 1995), with an increasing level of detail and clinical/policy usefulness.

D-22. International Comparison by Indication of Cesarean Section Delivery in the 1980's

The cesarean section rate in the United States remains among the highest in the world despite a leveling-off in the late 1980's. This presentation compares the level and trends in the use of cesarean delivery by indication in the United States, Norway, Scotland, and Sweden during the 1980's. A comparison based on medical indication for cesarean section is used to identify factors underlying national differences in obstetrical delivery practice and to identify pathways to decrease cesarean section rates, particularly in the United States.

D-23. Trends and Variations in Births to Hispanic Mothers

The birth certificates of every State and the District of Columbia include items on the Hispanic or ethnic origin of parents. These items were added to the birth certificates in 1978. Birth and fertility rates for Mexican, Puerto Rican, Cuban, and other Hispanic

women are shown for the years 1978–92 and are compared with rates for white and black non-Hispanic women. 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 to non-Hispanic mothers.

D-24. 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-25. 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-26. 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-27. Collection of Race and Ethnicity Data in National Health Surveys

In 1997, the Office of Management and Budget 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 the 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-28. 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-29. Do Children in the United States Have Access to Health Care? Data From the National Health Interview Survey

In 1993, over 4 million (6 percent) U.S. children from infants to 17 years lacked a regular source of health care, and over 7.3 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.

D-30 General Considerations When Conducting Trend Analysis With Data From the National Center for Health Statistics

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 trends analysis is being conducted.

D-31. The Availability and Use of Data From the National Center for Health Statistics 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-32. Health Service Areas for the United States

This presentation describes methods used to identify health service areas for the United States. A health service area is defined as one or more counties that are relatively self-contained with respect to the provision of routine hospital care. Hierarchical cluster analysis was used to group counties into service areas based on travel between counties by Medicare beneficiaries for routine hospital care. Four alternative solutions were generated. The preferred solution comprises 802 service areas, some of which cross State boundaries and split metropolitan statistical areas.

D-33. 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 HSV 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-34. 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 U.S. 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-35 Tetanus Immunity 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 1940's, NHANES III confirmed the existence of substantial gaps in tetanus immunity, particularly among the elderly who were either never vaccinated or had lost 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-36. Statistical Methods for Analysis of the NHANES I Epidemiologic Followup Study (NHEFS)

This presentation addresses a number of statistical issues encountered in the analyses of the NHEFS including: 1) the effect of the survey design on parameter estimates from Cox proportional hazards models; 2) the choice of the time-scale for the Cox models; and 3) modeling approaches when there are age interactions. The effect of the strata, primary sampling units (PSU's), and sample weights on parameter estimates from Cox models and their standard errors is discussed. Additional approaches to incorporating the survey design that are discussed include: 1) truncating the sample weights; 2) stratifying the analysis on variables used in the sample design; and 3) including variables used in the sample design in the model. The effect of using age as the time-scale in Cox models, rather than length of followup, is illustrated with data examples. In studies of chronic disease morbidity and mortality, the effect of risk factors may change with age. In the NHEFS, age interactions are complicated by the oversampling of certain age groups. A number of modeling approaches for handling age interactions are discussed.

D-37. Research Opportunities: Current Health Topics From the National Health Interview Survey

This presentation provides a description of data available from special supplements of the NHIS and examples of research issues that can be addressed with the data. The presentation can be a general overview of data available from the NHIS or can focus on specific topics of interest. Recent topics have included cancer risk factors, health promotion and disease prevention, health of the elderly, dental care, child health, occupational illness and injury, alcohol consumption, and medical device implants.

D-38. Injury Data From the National Center for Health Statistics

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-39. Nursing Home Utilization Profiles for an Admissions Cohort

Data from the 1985 National Nursing Home Survey are used to describe and characterize utilization patterns for a cohort of first admissions to nursing homes. Methodological and conceptual issues involved in the analysis and interpretation of these data are discussed.

D-40. 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-41. Trends in Delayed Childbearing

American women have been postponing marriage and childbearing to an unprecedented extent since the early 1970's. Because of sharp declines in birth rates for women in their twenties, 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. Trends in first birth rates by age of mother are presented for 1970–92. 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.

D-42. Teen Sexual Activity and Pregnancy

There are approximately 1 million pregnancies among teens each year in the United States, a

rate that surpasses that of every other industrialized democracy. The National Survey of Family Growth 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 in 1973, 1976, 1982, 1988, and 1995, so it allows examination of trends in levels of sexual activity among teens for more than two decades. In addition to tracking the incidence, the NSFG allows examination of other aspects of sexual activity, including whether or not first sex was voluntary; age and other characteristics of the first voluntary and selected other male sexual partners; number of sexual partners within specified time frames; current sexual activity and frequency; contraceptive use 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 and consequences of sexual activity.

D-43. NHANES Anthropometric Measurements

This presentation will focus on the selection and utility of various categories of anthropometric measurements in health examination surveys. The rationale for body measures as indicators of nutritional and overall health status along with analytic uses of these data will be covered. A discussion of practical considerations for obtaining standardized anthropometric measures in the survey environment will include techniques used to obtain measures and approaches for quality assurance and quality control.

D-44. Disability in America: Data From the National Health Interview Survey

Using data from the special 1994–97 National Health Interview Survey on Disability and data from the redesigned NHIS of 1997 and later, trends and differentials in the prevalence of disability are described and analyzed. Depending on the interests of the audience, attention may be focussed on special populations, such as women or minorities, or on special types of disability, such as sensory or mobility. Methodological issues affecting disability estimates, such as sample coverage, operational definitions, classification systems, and field procedures, are also covered.

D-45. Childlessness in America

The postponement of childbearing among younger women in the recent past has resulted in the current pattern of larger proportions childless at older ages. Among women reaching the end of the chilbearing period, those aged 40–44, the percent childless rose from 9 in 1975 to 16 in 1993. The NSFG allows examination of the phenomenon of childlessness in a particularly meaningful way. Since 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 ''voluntarily childless.'' The NSFG also includes measures of the subjective desire for children, allowing one to go beyond biological characteristics and further refine the classification of women as ''voluntarily childless.'' These measures have been available in most of the five cycles of the NSFG, allowing trend analysis over a substantial period of time.

D-46. Women's Health Overview: National Data Available From the National Center for Health Statistics to 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-47. Firearms in American Households

After a recent survey of data on mortality and injury involving firearms, public health objectives for safe storage of firearms in the home are reviewed. Home storage of firearms is described using data from the National Health Interview Survey, and the social and demographic factors associated with safe storage practices are examined. Attention is also given to methodological issues in survey measurement of firearm ownership and storage.

D-48. 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-49. 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 will be provided on the current prevalence of overweight in American youths and adults, and trends in overweight over time will be examined based on nationally representative data from the NCHS Health Examination Surveys.

D-50. Analytical and Epidemiologic Applications of NCHS Mortality Data

Mortality data from NCHS constitute one of the most widely used indicators of health because they are universally available down to the small-area level, uniformly processed, and generally of good quality. This presentation is an overview of cause-of-death classification in NCHS mortality data, collection and processing of the data, and data use. The distinction is made between underlying and multiple cause-of-death data. Problems of comparability among revisions of the *International Classification of Diseases* are discussed briefly.

D-51. Data on AIDS Available From the National Center for Health Statistics

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-52. Health Data for Minority Populations Available From the National Center for Health Statistics

In this presentation, NCHS data systems providing health data for minorities are described. A discussion of issues related to the collection, tabulation, and limitations of these data is included.

D-53. Trends in AIDS Testing

Since 1987, the National Health Interview Survey has tracked testing for HIV infection in large cross-sectional samples of U.S. adults. The data show that changes in public knowledge and attitudes about the AIDS epidemic were followed by changes in the frequency and manner of testing. In addition to reviewing those data, this presentation addresses issues of using health survey data to formulate and evaluate public health policy.

D-54. Issues in the Process of Revising the National Center for Health Statistics Growth Charts

The NCHS growth charts currently used nationally and adapted for use internationally were developed in the mid-1970's. Since then, statistical and substantive concerns have been identified with regard to the creation of the original charts. This presentation describes these concerns and discusses steps being undertaken in a multiphasic process to revise

the NCHS growth charts with data from the 1988–94 NHANES III.

D-55. Do Working-Age Adults in the United States Have Access to Health Care? Data From the National Health Interview Survey

In 1993, 33 million (20.9 percent) adults aged 18–64 in the United States had unmet medical needs. In this presentation, data from the National Health Interview Survey (NHIS) Access to Care Supplements are used to show the problems working-age adults have in the United States 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 and the inability to obtain prescription medicines, dental care, and eyeglasses.

D-56 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 two- or three-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.

E. Data Processing

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. Automation of Methods for Tracing Subjects and Proxy Respondents in Longitudinal Cohorts

As the number of longitudinal studies fielded by NCHS grows, the burden of tracing the cohort members, their proxy respondents, and other contacts becomes increasingly unwieldy. To manage the workload and maintain consistency among the tracing efforts for a variety of surveys, an automated system has been implemented. This presentation includes a discussion of a variety of techniques for obtaining and maintaining address, telephone, and vital status information on survey subjects. The difficulties and advantages of automating the tracing process are introduced. Specific topics include confidentiality issues, techniques for determining the information most likely to be accurate, comparisons of results from different tracing methods, and processing considerations such as database storage and the user interface. Some examples from the NCHS automated system are presented.

E-3. Survey Statistics Automation

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-4. 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 the National Center for Health Statistics 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 BMDP.

E-5. Introduction to the Statistical Export and Tabulation System (SETS) Designer Kit Workshop

This introductory workshop teaches how to use SETS software to incorporate documentation and data as one set for distribution on diskette or CD-ROM. The workshop is designed to give students hands-on experience using SETS. Each student must have an IBM-PC compatible microcomputer 80286 or greater, at least 640K memory, MS-DOS 3.31 or higher, and at least 20 MB of free space on the hard drive. The students will use the SETS Designer Kit to design the format to display their documentation and data, develop files that contain documentation and data as well as codes and values, analyze and revise errors in compilation and indexing of the set, and produce a set and pack it to diskettes.

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 American Indians, 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. Funding Opportunities Under the Minority Health Statistics Grants Program

This presentation describes funding opportunities available to extramural researchers under the grants program. An overview of the selection of the appropriate financial assistance mechanism, preparation of the funding announcement, and pre- and post-award phases of sponsored research will be discussed.

F-5. Understanding and Applying Statistical Ethics

The American Statistical Association (ASA) has adopted a revised and comprehensive set of ‘‘Ethical Guidelines for Statistical Practice,’’ November 1999. There are also United Nations guidelines for official statistics systems. The idea of statistical ethics is fairly new, having been popularized by W. Edwards Deming in the 1960’s and 70’s. Successive ethics documents, including the 1985 Declaration on Professional Ethics of the International Statistical Institute, have become more complex as public interest in, and government oversight of, research ethics have grown. Current statistical ethics derives from diverse sources including ethical philosophy, the concept of professional ethics (as applied to doctors, lawyers, engineers, and others), previous writings on statistical ethics, and evolving ethical issues in society and in research. There continue to be open issues under consideration for future revisions of the guidelines by the ASA’s Committee on Professional Ethics. The presenter led the development of the current ASA Ethical Guidelines, advised the International Statistical Institute on formation of its own Committee on Professional Ethics, and has taught the first ASA continuing education course in statistical ethics. Emphasis in the presentation is on using an understanding of statistical ethics to solve practical problems in actual statistical work environments.

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HEALTH & HUMAN SERVICES

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DHHS Publication No. (PHS) 2000-1302
0-0603 (9/00)