


## The Supplement on Aging to the 1984 National Health Interview Survey

Includes descriptions of the sample, questionnaire content, and survey operations, and presents strategies and procedures for analysis of the Supplement on Aging to the 1984 National Health Interview Survey.

Programs and Collection Procedures Series 1, No. 21

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National Center for Health Statistics
Manning Feinleib, M.D., Dr.P.H., DirectorRobert A. Israel, Deputy DirectorJacob J. Feldman, Ph.D., Associate Director for Analysisand Epidemiology
Gail F. Fisher, Ph.D., Associate Director for Planningand Extramural ProgramsPeter L. Hurley, Associate Director for Vital and HealthStatistics Systems
Stephen E. Nieberding, Associate Director for Management
George A. Schnack, Associate Director for Data Processingand ServicesMonroe G. Sirken, Ph.D., Associate Director for Researchand Methodology
Sandra S. Smith, Information Officer
Vital and Health Statistics Systems
Peter J. Hurley, Associate Director
Mary Grace Kovar, Dr.P.H., Special Assistant for Data
Policy and Analysis
Gloria Kapantais, Assistant to the Director for Data Policy,Planning and Analysis
Division of Health Interview Statistics
Owen T. Thornberry, Jr., Ph.D., Director
Gerry E. Hendershot, Ph.D., Chief, Illness and DisabilityStatistics Branch
Nelma B. Keen, Chief, Computer Systems and Programming
Branch
Stewart C. Rice, Jr., Chief, Survey Planning and
Development Branch
Robert A. Wright, Chief, Utilization and Expenditure

Cooperation of the U.S. Bureau of the Census
Under the legislation establishing the National Health Interview Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies.
In accordance with specifications established by the Division of Health Interview Statistics, the U.S. Bureau of the Census, under contractual agreement, participated in planning the survey and collecting the data.

## Contents

Introduction ..... 1
Overview of the National Health Interview Survey ..... 1
Overview of the 1984 Supplement on Aging ..... 2
Chapter 1. Sample description ..... 4
National Health Interview Survey ..... 4
Supplement on Aging ..... 4
Figure

1. SOA sample selection tables A and B ..... 5
Table
A. Number of persons for whom interviews for the Supplement on Aging were obtained, by age and sex ..... 5
Chapter 2. Questionnaire planning and development. ..... 6
Planning and development of the SOA Questionnaire ..... 6
Pretests ..... 7
Description of the SOA Questionnaire ..... 9
Table
B. Length of interview of the National Health Interview Survey (NHIS) and of the Supplement on Aging (SOA): Bradenton Pretest ..... 8
Chapter 3. Survey operations ..... 11
Data collection ..... 11
Interviewer training ..... 11
Data collection ..... 11
Quality control: Data collection ..... 12
Quality control procedures ..... 12
Reinterviewing ..... 13
Quality control: Data processing and editing ..... 13
Table
C. Response rates for the Supplement on Aging (SOA), by quarter and type of response ..... 12
Chapter 4. Analysis of SOA data. ..... 15
Estimation ..... 15
Weights ..... 15
Point estimates. ..... 15
Examples of national estimates ..... 17
Variances ..... 17
Curves of relative standard errors ..... 17
Design effects. ..... 18
Calculating variances ..... 18
Considerations of sample design ..... 19
Strategies for analysis ..... 19
Relationship between the questionnaire and the data ..... 19
Preliminary analysis ..... 19
Weighted analysis ..... 20
Final analysis ..... 20
Figures
2. Poststratification cells for SOA ..... 15
3. Stages for analysis of data from a survey with a complex sample design ..... 19
Tables
D. Number of persons in the National Health Interview Survey (NHIS) and Supplement on Aging (SOA) samples and Sup- plement on Aging response rates, by selected characteristics. ..... 16
E. Sample numbers and population estimates for persons ages 55 years and over, by selected characteristics: National Health Interview Survey (NHIS) and Supplement on Aging (SOA), 1984 ..... 16
Chapter 5. Differences between data files from the 1984 NHIS Basic Questionnaire and the Supplement on Aging ..... 21
Weights ..... 21
Respondents ..... 21
NHIS basic respondent rule ..... 21
SOA respondent rule ..... 21
Conditions ..... 21
Condition lists ..... 21
Conditions on condition file ..... 21
Family relationship and number of persons ..... 22
Family relationship ..... 22
Number of persons in the family ..... 23
Tables
F. Number and percent of self-responses to the Supplement on Aging and number of proxy responses, by selected demo- graphic and health characteristics ..... 22
G. Number and percent of self-responses to the Supplement on Aging (SOA) and number of proxy responses, by type of re- sponse to the National Health Interview Survey (NHIS) Basic Questionnaire ..... 22
Chapter 6. Prospective studies ..... 24
Followup through the National Death Index ..... 24
Other aspects of the Longitudinal Study of Aging ..... 24
Table
H. Number and percent of persons in the Longitudinal Study of Aging (LSOA) 1986 initial followup reinterview sample, by age and race ..... 25
References ..... 26
Appendixes
I. 1984 National Health Interview Survey Basic Questionnaire ..... 29
II. 1984 Supplement on Aging Questionnaire ..... 51
III. Bradenton, Florida, Supplement on Aging Pretest Questionnaire ..... 70
IV. Supplement on Aging Reinterview Questions ..... 102
V. Definition of selected terms in the 1984 Supplement on Aging ..... 106
VI. Selected information about the design and estimation of the 1984 Supplement on Aging ..... 108
VII. Examples using SAS ..... 112
VIII. Consultants and staff of the 1984 Supplement on Aging ..... 114

## Symbols

.-. Data not available
... Category not applicable

- Quantity zero
0.0 Quantity more than zero but less than 0.05

Z Quantity more than zero but less than 500 where numbers are rounded to thousands

* Figure does not meet standard of reliability or precision
\# Figure suppressed to comply with confidentiality requirements


# The Supplement on Aging to the 1984 National Health Interview Survey 

by Joseph E. Fitti, MSPH, Division of Health Interview Statistics, and Mary Grace Kovar, Dr.P.H., Vital and Health Statistics Systems

## Introduction

## Overview of the National Health Interview Survey

The National Health Survey Act of 1956 provided for a continuing survey to secure, on a voluntary basis, accurate and current statistics on the amount, distribution, and effects of illness and disability in the United States and the services rendered because of such conditions. Mandated by this legislation, the National Health Interview Survey (NHIS) is a principal source of information on the health of the civilian noninstitutionalized population of the United States.

The purpose of the survey is to provide national data on the incidence of illness and accidental injuries, the prevalence of chronic conditions and impairments, the extent of disability, the utilization of health care services, and on other health related topics. A major strength of the survey is that these statistics can be obtained for the U.S. civilian noninstitutionalized population. Because NHIS data are obtained during household interviews from the people themselves, the statistics are a measure of health status and experiences and a reflection of the social and economic dimensions of health issues as reported by individuals, that is, the extent and impact of illness and disability and the resulting uses of health care services are reported by the people experiencing them.

Interviews are conducted each week throughout the year in a probability sample of households. The interviewing is performed by a permanent staff of highly trained and supervised interviewers of the U.S. Bureau of the Census under detailed specifications provided by the Division of Health Interview Statistics, National Center for Health Statistics (NCHS). U.S. Bureau of the Census interviewers trained on the NHIS, some of whom have worked on this survey for over 10 years, generally work only on this survey and remain as its field staff for their full careers as Census interviewers.

The questionnaire used in the interview is divided into two basic units, a basic questionnaire that is constant over long periods and special topic questions, or a supplement, that differ from year to year (appendixes I and II, respectively).

The basic questionnaire contains items on

- Basic demographic characteristics of household members, including age, sex, race, Hispanic origin, education, marital status, veteran status, employment or major activity status, and income.
- Disability days, including restricted activity and bed days, and work or school loss days occurring during the 2-week period prior to the interview.
- Doctor visits during the past year and during the 2 weeks prior to the interview.
- Acute and chronic conditions responsible for disability days and doctor visits.
- Long-term limitation of activity resulting from chronic disease or impairment and chronic conditions associated with disability.
- Short-stay hospitalization, including number of persons with hospital episodes during the past year and number of discharges from short-stay hospitals.
- Interval since the last doctor visit.

Supplements are changed in response to current interest in special health topics. Suggestions and requests for special topic coverage are solicited and received from many sources. These include the Public Health Service and other agencies of the Department of Health and Human Services, other Federal agencies, university-based researchers, administrators of national organizations and programs in private and public health sectors, and other specialists in the field of interest. In addition, NCHS staff are aware of data needs and issues of public health importance for consideration as special topics to be included in the NHIS.

Facsimilies of the first pretest questionnaire, reinterview questions, definitions of the SOA terms, information about survey design and estimation, examples for the Statistical Analysis System's (SAS) processing of data, and the consultants and staff of the SOA appear in appendixes III-VIII.

The sample design of the NHIS, which is discussed in more detail in the section Sample description, provides unique analytic opportunities. The sample is designed so that each week's data collection constitutes a sample of the civilian noninstitutionalized population of the United States. The weekly samples can be aggregated to increase the sample size, or they can be used to study trends or seasonal variation.

Data collected over the period of a year form the basis for annual estimates of the health characteristics of the population. These annual estimates are the bases for most NHIS reports, such as "Current Estimates," which is published annually in Vital and Health Statistics.

Data collected over a longer period can also be aggregated
and appropriately weighted to form the basis for average annual estimates. These estimates are the basis for many analyses of low-frequency characteristics, such as the prevalence of some chronic conditions or special characteristics of contacts with physicians.

Conversely, data from any quarter can be analyzed to study short-lived high-frequency phenomena, such as major flu epidemics, or to study seasonal variation. If the techniques are combined, seasonal variation over the course of many years can be studied.

Throughout the NHIS data collection and data processing, extensive quality control procedures are followed to reduce nonsampling errors in the data produced from both the basic questionnaire and the special topic questions. (For details, see reference 1.)

Data release occurs in many forms including publications, tabulations, and public-use data tapes.

Data are published by the Center in Series 10 of Vital and Health Statistics, in Advance Data, and in Health United States. Information about how to order publications can be obtained by writing or calling the Scientific and Technical Information Branch of NCHS. Data are also released in Statistical Abstracts of the United States and many other Federal Government publications. The U.S. Government Printing Office sells the NCHS and other Federal agency publications.

Public-use data tapes containing basic questionnaire data are released by NCHS through the National Technical Information Service (NTIS) in Springfield, Va. ${ }^{\text {a }}$ The public-use tapes, which contain all the information on the basic NHIS questionnaire, are usually released to the research community within 2 years of the completion of the calendar year of the data collection. That is, all data collected on the basic questionnaire in 1984 are available to anyone who wishes to purchase the data tapes through NTIS.

Public-use data tapes containing supplement topic data, including the 1984 SOA, are available directly from the Division of Health Interview Statistics, National Center for Health Statistics, by writing to

## Division of Health Interview Statistics

National Center for Health Statistics
Center Building, Room 2-44
3700 East-West Highway
Hyattsville, Maryland 20782.
The release of the public-use tapes means that many analyses are published by people or organizations that are not connected with NCHS. Although the NCHS staff are interested in who uses the data and often work with independent analysts if asked, the responsibility for using the tapes correctly rests with the users. This monograph is designed to describe the design and implementation of the 1984 Supplement on Aging and to assist users of the data from it.

[^1]
## Overview of The 1984 Supplement on Aging

Increasing interest in aging led to the entire 1984 supplement's being devoted to a population group rather than to a single health topic. A precedent had been set for dedicating an NHIS supplement to a specific population group in 1981 when a comprehensive supplement on children was conducted as part of the survey. In the Child Health Supplement, data were gathered on a national probability sample of 15,416 children 17 years of age and under, and information was provided on a variety of specific issues related to that population.

Concerns among a number of public health agencies and individuals about the increasing proportion of older people in the U.S. population led, as early as 1980 , to recommendations that the NHIS address this special subgroup. Issues dealing with the health and functional status of older people and the need for alternatives to institutionalization as the mode for providing care were identified at this early point by professionals in the field of aging. ${ }^{2-6}$ Information about these and related characteristics of the older population was needed.

Statements of the need for this information were made by the Department of Health and Human Services in the 1980 National Long-Term Care Data Plan of the Division of LongTerm Care Policy, Office of the Assistant Secretary for Planning and Evaluation; ${ }^{7}$ by the Office of Management and Budget in its 1980 report of the Interagency Statistical Committee on Long-Term Care of the Elderly; ${ }^{8}$ and by the 1981 White House Conference on Aging, Final Report, Vol. III, Recommendation No. 627.9,10

It was postulated that information about the health conditions that were most prevalent, about living arrangements, family and social support availability, retirement income and financial obligations, functional status and limitations, and attitudes and opinions about their own health and abilities would help in assessing the future needs of the elderly. ${ }^{11,12}$

In addition to responding to the topic recommendation of the National Health Interview Survey's Technical Consultants Panel that these informational needs about the elderly could be addressed through the NHIS, a special supplement on aging in 1984 was particularly timely because NCHS planned to conduct the National Nursing Home Survey (NNHS) in 1984. The SOA data on the noninstitutionalized population would complement the NNHS data on residents of nursing homes and would provide, for the first time, comprehensive data on almost the total elderly population.

The development of a supplement to help provide some of this information from a national survey of elderly people themselves began in 1982 and resulted in the 1984 NHIS Supplement on Aging that is described in this report. The objectives of the 1984 SOA were:

- To characterize the health and social status of people aged 55 and over in the United States.
- To provide information about how psychosocial and environmental factors interact with health factors to influence the aging individual in a changing society.
- To provide a knowledge base for investigating issues of prevention and postponement of disability and dependency
and for framing research questions and hypotheses on the interplay between changing home environments and the aging individual.
- To delineate issues and data for research on the enhancement of care, social support, and coping for those older people who do become disabled.
- To provide information about factors that influence indi'viduals' ability to live independently in the household and the community as they grow older.
- To form the basis for a prospective study, the Longitudinal Study of Aging (LSOA). (See chapter 7 of this report for description of the LSOA.)

In 1984 the supplement to the NHIS was the Supplement on Aging. NCHS selected this as the supplemental topic; no outside funds were sought or received. However, special supplement suggestions that had been received from outside agencies through the topic solicitation process were incorporated, and there was extensive consultation with staff of other agencies. Consequently, the needs of other organizations in the Federal Government were met as much as possible.

## National Health Interview Survey

The National Health Interview Survey (NHIS) sample is designed to produce national estimates for the civilian noninstitutionalized population residing in the United States. The approach to doing so is first to divide the United States into geographically defined areas called primary sampling units (PSU's), which collectively cover the 50 States and the District of Columbia. The PSU's are classified into strata (combinations of PSU's with similar characteristics), and, in 1984 and earlier years, one PSU was selected from each stratum. Within the selected PSU's, small compact clusters of housing units are then selected. Details of the sample design, listing segments, and selecting housing units in the NHIS sampling procedure are provided in Series 1 of Vital and Health Statistics. ${ }^{1,13}$

There is clustering within the PSU, within the segment, and within the household because all family members in the selected housing unit are in the sample. This clustering causes the procedures for analysis, especially the variance estimation, to differ from those in simple random sampling.

An important aspect of the NHIS sample design is that it is a multistage probability design that permits a continuous sampling of the civilian noninstitutionalized population in the United States. It is designed in such a way that the sample scheduled for each week is an independent sample of the population; the weekly samples are additive over time. Thus, the design permits estimates for high-frequency measures (or for large population groups) to be produced from a short period of data collection and estimates for low-frequency measures (or for smaller population subgroups) to be obtained from a longer period of data collection. Because interviewing is done throughout the year with about 800 households in the sample each week, there is no seasonal bias in the annual estimates.

The NHIS sample is updated or redesigned after each decennial census. The redesign that was implemented in 1973 was an update and modification of earlier sample designs rather than an entirely new design. This update formed the basis for the 1984 NHIS sample. Details of the design and the updated sample have been published. ${ }^{1,13}$

In 1984, 41,471 eligible households were in the NHIS sample. Interviews were conducted in 39,996 ( 96.4 percent) of these households, yielding data on 105,290 persons of all ages who resided in them at the time of the interview. ${ }^{14}$

## Supplement on Aging

One of the objectives of the Supplement on Aging (SOA) was to provide finer statistical measures of functional limita-
tions and the presence of chronic health conditions among older persons than is provided in the NHIS basic questionnaire. (See appendix I.) To produce a broader base for estimating these and other critical characteristics of this subpopulation, a sample design was developed that permitted collecting the maximum amount of information about older people, among whom the occurrence of these health "problems" is greatest, namely, people 65 years and over.

Another objective of the SOA was to provide information about older people that could be used as baseline data in measurements of change over time through a later prospective study. This longitudinal study was conceived as an assessment of change over time both among those older and most likely to have problems and also among those less likely to have problems in 1984 but who would move into the critical ages within 10 years. With this objective of later contact to ascertain changes, the age level established for the SOA sample was 55 years and over. This age level was also determined as appropriate for the SOA because of the need for information about age differentials in the ability of the elderly to work and about the impact on the work force of early retirement among those under 60 years of age; ages 55 years and over provided an appropriate age cutoff.

Because there are a large number of people in the age group 55-64 years in contrast to the older ages, selecting all of them would have yielded more precision than needed to make comparisons with the older group. Further, the SOA entailed a long interview and, because there were more likely to be multiple persons in households with younger age people, extremely long interviews would have resulted because each eligible person was interviewed for himself or herself. Because problems among younger people are less prevalent than among older ones and for the cost savings it provided, it was decided further that including all people in the younger ages in the sample was not necessary.

Consequently, the design of the SOA sample was:

- A systematic one-half sample of people in the 1984 NHIS households who were ages 55-64 years.
- All people in the 1984 NHIS households who were ages 65 years and over.
The selection of sample persons was accomplished by using the listing form on the front of the SOA questionnaire (figure 1). The procedure for selecting the one-half sample of people ages 55-64 years was simply listing by age, from oldest to youngest, persons 55-64 years and selecting those listed on every other line of the listing form.

| SUPPLEMENT ON AGING SAMPLE SELECTION |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use Table A or B as indicated on HIS-1 Household Composition Page. Circle that letter and enter number below to indicate the order of interview $11 \cdots$ down from the top of the listing. 2 up from the bottom). Follow this order whenever two or more sample persons are at home at the same time. |  |  |  |  |  |  | $\begin{array}{\|c\|} \hline \text { RT } 64 \\ \hline 3-4 \end{array}$ |
| Are there any nondeleted persons 65 years old or older in the family? |  | ```1 }\square\mathrm{ Yes (List by age (oldest to youngest) in upper portion of appropriate table, mark "SP" box on HIS-1 for each, THEN 19) 2\squareNo (19)``` |  |  |  |  | 5 |
| Are there any nondeleted persons 55--64 years old in the family? |  |  |  |  |  |  | 6 |
| TABLEA _-_ |  |  |  | TABLE B |  |  |  |
| Age | Name | Person number | $\begin{array}{\|c\|} \hline \begin{array}{c} \text { Sample } \\ \text { person } \end{array} \\ \hline \end{array}$ | Age | Name | $\begin{aligned} & \text { Person } \\ & \text { number } \end{aligned}$ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Sample } \\ \text { person } \end{array} \\ \hline \end{array}$ |
| 7-8 |  | [9-10] | X | [39-40 |  | 41-42 | $x$ |
| 11-12 |  | 13-14 | X | 43-44 |  | 45-46 | X |
| 15-16 |  | 17-18 | X | 47-48 |  | 49-50 | x |
| 19-20] |  | 21-22 | $\times$ | [51-52] |  | 53-54\| | $\times$ |
| 23-24 |  | \|25-26 | X | 55-56 |  | 57-58 |  |
| 27-28 |  | 29-30 |  | 59-60] |  | 61-62 | X |
| 31-32 |  | 33-34] | X | 63-64 |  | 65-66 |  |
| [35-36 |  | [37-38] |  | 67-68 |  | 69-70 | x |

Figure 1. SOA sample selection tables $A$ and $B$

The listing forms were printed on the cover of the SOA questionnaire (appendix II), and they provided for selection starting with the first line on one-half of the forms and with the second line on the other half. People ages 55-64 years were listed on the form even though they had been included in the NHIS basic household listing procedure. This relisting of NHIS basic information was necessary to produce the eligible persons listed in the order of oldest to youngest for the SOA selection and to permit the SOA record to include all the eligible household members.

Interviewers were given questionnaires with the two selection versions alternated to ensure equal use of both versions. Additionally, interviewers were instructed to try to alternate between the two sample selection versions if the order of supplies was disturbed or if no persons ages 55 years and over lived in the household.

In addition, to further assure randomization in the selection procedure and to aid in overcoming position bias in households with more than one selected sample person, the order in which the interviewer asked to interview a selected sample person was controlled to alternate between top-down and bottom-up sequences.

A similar procedure of listing all people ages 65 years and over was followed. However, all of these listed people were selected for interview.

In some households the sampling procedures resulted in more than one person being selected for the SOA interview.

The sample design produced a statistically valid sample of

Table A. Number of persons for whom interviews for the Supplement on Aging were obtained, by age and sex

|  | Age and sex | Number |
| :---: | :---: | :---: |
| Total |  | 16,148 |
| Age |  |  |
| 55-64 years. |  | 4,651 |
| 65-74 years. |  | 7,093 |
| 75-84 years. |  | 3,578 |
| 85 years and over |  | 826 |
| Sex |  |  |
| Male |  | 6,793 |
| Female |  | 9,355 |

persons ages 55 years and over living in the NHIS households who were interviewed in 1984. It permitted adjustment for probability of selection and application of NHIS weighting procedures to yield national estimates as well as estimates for the four geographic regions defined by the U.S. Bureau of the Census and for some large metropolitan areas.

The number of persons for whom SOA interviews were obtained is shown by age and sex in table A.

Because the NHIS is based on a sample with approximately equal probability of selection, the SOA sample design produced, in effect, a distribution for people ages 65 years and over in the sample that is about the same as that in the civilian noninstitutionalized population.

# Chapter 2 <br> Questionnaire planning and development 

## Planning and development of the SOA questionnaire

Planning and development of the Supplement on Aging (SOA) questionnaire began in February 1982. The first step was to determine the topics to be included.

Topic suggestions were received from a variety of sources, both inside and outside the National Center for Health Statistics (NCHS). Suggestions from outside NCHS came in response to the topic solicitation from the Division of Health Interview Statistics and from notifications to interested agencies and persons about plans to develop a supplement on aging. Suggestions from outside NCHS came from sources such as the National Institute on Aging, the Administration on Aging, the U.S. Senate Select Committee on Aging, the U.S. House of Representatives Special Committee on Aging, the Social Security Administration, voluntary and nonprofit organizations, and experts in the field of aging.

Decisions about topics to include required consideration of two major factors: the feasibility of obtaining the data in the NHIS interview and the comparability with data to be collected in other Center surveys in which information was gathered on the elderly population. In the latter context, it was necessary for the SOA to include information about the noninstitutionalized population that would be similar to that gathered in the National Nursing Home Survey on the institutionalized older population, so that by combining the data from the two surveys estimates for the total older population would be possible.

Another important consideration, which helped focus the content of the SOA, was the objective of providing information that would be useful in determining alternatives to institutionalization when the elderly become impaired. Though crosssectional in character, the SOA information about personal and community resources available to the elderly, about functional and health status, and about use of care services would be pertinent to this objective.

However, to assess the relationship between these aspects of the lives of elderly people and any later need for institutionalization or other care would require additional data on change in status and use of resources to continue independent living. Consequently, it was necessary for the cross-sectional SOA to be conceived as also being the baseline data source for later longitudinal information to study the relationship between changes in functional status and living arrangements and the path from independent living through dysfunction and institutionalization to death.

These concepts and objectives provided the guidelines and determined the SOA topic coverage.

Activities to develop the concepts and to conduct the background research on existing surveys and questions dealing with the topics suggested for the SOA began in February 1982, following the review of topic suggestions.

The evaluation of the suggestions and the development of the first version of the questionnaire involved literature reviews, reviews of previous or existing surveys, extensive consultation with both agencies and individuals knowledgeable in the suggested topic areas (appendix VIII), and participation in both privately and federally sponsored conferences and meetings on issues of the aging.

An NCHS Work Group on Surveys of the Aging (appendix VIII), which addressed issues and developed recommendations for coordination among the National Nursing Home Survey, the National Mortality Followback Survey, and the NHIS Supplement on Aging, provided additional input in evaluating the topics to be included in the SOA and in guiding the development of the SOA questionnaire.

The result of the research and investigation of 22 suggested topics was the recommendation, made in October 1982, to include the following seven areas:

- Family structure, relationships, support and living arrangements. ${ }^{15-17}$
- Community and social support. ${ }^{15,16,18,19}$
- Occupation and retirement. ${ }^{20,21}$
- Conditions and impairments.4,22-27
- Structural characteristics of housing, activities of daily living (ADL's), instrumental activities of daily living (IADL's) and special aids. ${ }^{28,29}$
- Regular medical care and nursing home stay. $4,28,29$
- Health opinions and behavior, including the Center for Epidemiology Studies-Depression (CES-D) scale as a measurement of mental health status, alteration or disturbance of mood, indication of gross memory loss, and locus of control. ${ }^{15,29-32}$

Because the information sought about each person would usually be reported most reliably by the sample persons themselves, the respondent rule established was self-response except in cases where sample persons were physically or mentally unable to respond. In these cases, an adult, preferably living in the household, would be accepted as proxy.

A questionnaire covering the seven topics (appendix III) was designed; and it, along with the plan for the first pretest,
was submitted to the Office of Management and Budget (OMB) for clearance. The relationship with other surveys was one consideration in the design. Wherever reasonable, the items used in the questionnaire were drawn from questionnaires of other surveys that had already been tested or from surveys that had already been conducted.

Questions from the following surveys were used in designing the first pretest document:

- National Center for Health Statistics surveys
- The National Health Interview Survey, basic questionnaire and previous supplements.
- The 1976-1980 Second National Health and Nutrition Examination Survey, OMB 68-R1502.
- The 1977 National Nursing Home Survey-Resident Questionnaire, OMB 68-S75025.
- The 1979 National Survey of Personal Health Practices and Consequences, OMB 68-R1663.
- The 1983 NHANES Epidemiologic Followup Study, OMB 0925-0161.
- The 1982-84 National Hispanic Health and Nutrition Examination Survey, OMB 0937-0078.
- The 1985 National Nursing Home Survey, OMB 0937-0114.
- Other surveys
- The 1972 Survey of Work Experience, National Longitudinal Survey, OMB 1205-0044, U.S. Bureau of the Census, Department of Commerce.
- The 1974 Supplemental Income Survey, OMB 72S73009, Social Security Administration, Department of Health, Education, and Welfare (DHEW).
- The 1974 Survey of Low Income, Aged and Disabled, OMB 72-S74005, Social Security Administration, DHEW.
- The 1975 Survey of Institutionalized Persons-Family Questionnaire, OMB 41-S75070, DHEW.
- The 1976 National Survey of the Aged, conducted by the University of Chicago. ${ }^{33}$
- The 1978 Annual Housing Survey, Longitudinal Survey of Housing Adjustments of Older People, OMB 63-R1656, Department of Housing and Urban Development (DHUD).
- The 1978 Survey of American Family Life, OMB 68-S75078, National Institutes of Health, Department of Health and Human Services (DHHS).
- The 1978 Survey of Disability and Work, OMB 72S77007, Social Security Administration, DHHS.
- The 1979 Retirement History Survey, OMB 72S70411, Social Security Administration, DHHS.
- The 1982 Long-term Care Survey, OMB 0990-0021, Health Care Financing Agency, DHHS.
- The 1982 Survey of Work Experience-National Longitudinal Survey, OMB 1205-0044, U.S. Bureau of the Census, Department of Commerce.


## Pretests

The National Health Interview Survey (NHIS) pretest samples are prepared by the U.S. Bureau of the Census espe-
cially for each pretest. Pretest samples are drawn from the NHIS sample, which is made large enough to allow such pretests. ${ }^{1}$ When possible, the pretest samples are drawn from communities that are easily accessible to Washington, D.C., and have census tracts with population characteristics that are most likely to provide enough respondents to test the questions and procedures designed for the specific survey. The SOA pretest samples were drawn from census tract listings in communities and from tracts within those communities with a high prevalence or proportion of residents ages 55 and over.

Two pretests were conducted in the development of the Supplement on Aging. OMB approval of the survey was requested in two submissions, the first covering the first pretest only and the second covering the second pretest and the full 1984 NHIS. This procedure was used because of the exploratory nature of the first pretest with a preliminary questionnaire that required the experience of actual interviewing to assess and determine modifications.

Bradenton, Fla., was the site of the first pretest conducted June 6-10, 1983. It was selected because it is a popular location for retirement, and it has a high proportion of residents who are 55 years of age or over.

Eighteen specially selected, experienced NHIS interviewers and 22 observers from the National Center for Health Statistics and the Bureau of the Census participated in this pretest. Pretest materials that were prepared included questionnaires (appendix III), interviewer manual, training guide, observation form and instructions, interviewer debriefing form and instructions, and administrative reports and forms.

Classroom training, conducted by the U.S. Bureau of the Census' Field Division trainer, was held on the first day, followed by 3 days of observed interviewing and a one-half day debriefing session.

Advance letters were mailed to households in the selected pretest sample segments. Each household was then visited by an interviewer, interviews, however, were conducted only in households in which there was at least one person 55 years or over. The full NHIS basic questionnaire and the First Pretest Supplement on Aging questionnaire were administered in all interviewed households.

The pretest respondents answered the questions according to the rule planned for the survey, that is, responding for themselves unless physically or mentally incapable of doing so. If more than one person 55 years or over lived in the household, all those of eligible ages were interviewed.

Interviews in the Bradenton Pretest were obtained from 256 sample persons in 181 households. Approximately 20 percent of the test households had more than one sample person. Forty-three percent of the interviews were conducted with male respondents and 57 percent with female respondents. Ninety-two percent of the interviews were with people 65 years or over. Noninterviews in the first pretest were negligible.

Generally, respondents were very cooperative, mentally alert, and in relatively good health.

The length of time for the interview (table B) was greater than anticipated and was the most serious problem revealed by the first pretest. From the interviewer debriefings, observer debriefings, and tabulations and reviews of the completed pretest

Table B. Length of interview of the National Health interview Survey (NHIS) and of the Supplement on Aging (SOA): Bradenton Pretest

Item $\quad$\begin{tabular}{c}
Total <br>
interview

 

NHIS basic <br>
interview

$\quad$

SOA <br>
interview
\end{tabular}

| Number of SOA persons in household | Minutes per household |  |  |
| :---: | :---: | :---: | :---: |
| One | 81.0 | 24.6 | 56.4 |
| Two. | 123.0 | 28.5 | 94.5 |
| First person. | . . . | . . | 52.2 |
| Second person. |  |  | 42.3 |

questionnaires, it was discovered that three interrelated problems dominated the first pretest and contributed to the long interviews-questionnaire length, perceived repetition of questions, and multiple sample persons per household.

A principal reason for the long interviews was the seeming repetition of nearly similar questions in several topic areas such as in the Family Structure and Living Arrangements and Community and Social Support sections, and the Activities of Daily Living (ADL), the Instrumental Activities of Daily Living (IADL), and the Occupation/Retirement sections. Additionally, some environmental items were asked unnecessarily of all sample persons in a household with more than one eligible person and were repetitious.

The Bradenton Pretest produced valuable information needed to make revisions in both content and procedures that would reduce the length of the SOA interview and still allow all persons in households with more than one eligible person to be interviewed.

The major revisions to the first pretest document included:

- Changing detailed questions about living family members to ask about children and siblings only.
- Reducing the number of kinds of help received as support to ask about financial support only.
- Reducing the inquiry about awareness, knowledge of sponsorship, and long-term and short-term usage of community services to recent, short-term usage only.
- Reducing the number of questions about social activities in which the sample person participates.
- Eliminating the detailed information about the health condition, if any, for which retirement benefits are received.
- Eliminating obtaining the health condition that causes difficulty performing 10 job-related tasks and measuring existence of difficulty only.
- Deleting questions about use of specific prostheses and other physical function aids.
- Reducing the detailed items about use of medical care services to asking about doctor visits only.
- Deleting the CES-D scale. In Bradenton, it was discovered that the list of items worked well if there was only one person present. If another household member was present, there was too much interaction between them to obtain valid information.
- Eliminating items that repeated NHIS basic questionnaire items.

The questionnaire was revised extensively on the basis of the Bradenton experience, and OMB clearance for the second pretest and the main study was granted.

The second pretest, using the shortened SOA questionnaire, was conducted in Wilmington, Del., September 22-26, 1983.

Approximately the same number of interviewers and observers attended the Wilmington pretest. Training, interviewing, observation, and debriefing procedures were identical to the first pretest. Materials for training and observation were rewritten for the second pretest questionnaire and procedures.

During the second pretest, a total of 234 NHIS basic questionnaires and SOA questionnaires were completed. These included the following numbers of the two questionnaires, obtained by the mode of interviewing indicated:

## Number

## Interview method

161 Both NHIS basic and SOA questionnaires collected by observed personal interviewing.
11 NHIS basic questionnaires collected by observed personal interviewing and SOA questionnaires collected by telephone interviewing.
62 NHIS basic questionnaires only collected by observed personal interviewing obtained in households with no persons 55 years or older.

Telephone interviewing was used for a small portion of the test to determine the feasibility of conducting callbacks by this interview mode.

Though the pretest sample population in Wilmington was generally a more diverse and younger group, they were equally cooperative.

The Wilmington pretest revealed that the interview was still long, averaging 40 minutes for the SOA. However, problems of redundancy of questions and multiple sample persons per household were resolved with the second pretest formatting and question revisions.

Following the second pretest debriefings and questionnaire reviews, further modifications were made to the content of the questionnaire to reduce the length. The procedure for rotation of the order of interview for conducting the SOA in households with more than one sample person was developed to help reduce the apparent bias of fewer reported conditions and the preponderance of women respondents in the second interview in these households.

The NCHS SOA Work Group (appendix VIII) reviewed the Wilmington pretest results and the suggestions for modifications. The work group, made up of members from all survey programs in the Center, assisted in making decisions about question rewording and deletions to achieve the desired 25minute interview for the final version of the SOA.

The major revisions in the coverage made as a result of the two pretests were:

- The procedure to ask the items about family structure, relationship, and support only once in those households with both a husband and wife in the SOA sample.
- The reduction in the number of items about the structural characteristics of the residence.
- The simpler version of items about community and social support that eliminated specific awareness and knowledge questions and addressed only usage of community services.
- The refinement of information obtained about sources of retirement income and deletion of questions about the longest held job.
- The reformatting of ADL's and IADL's to make it easier for the interviewer to administer and for the respondent to answer while still obtaining information about the main condition causing difficulty performing the activity.
- The reduction of the number of items about receipt of health care to eliminate duplication of basic NHIS questions about doctor visits and to allow interviewers to concentrate on information about recent nursing home stays.
- The deletion of the CES-D scale.


## Description of the SOA Questionnaire

The final SOA Questionnaire, resulting from the two pretests and revisions based on these experiences, contains the following topic sections (appendix II):

- Section N, Family Structure, Relationships, Support, and Living Arrangements.
- Section O, Community and Social Support.
- Section P, Occupation and Retirement.
- Section Q, Conditions and Impairments.
- Section R1, Activities of Daily Living (ADL's).
- Section R2, Instrumental Activities of Daily Living (IADL's).
- Section S, Nursing Home Stay, Help with Care, and Hospice.
- Section T, Health Opinions.
- Section U, Condition Pages.

The final questionnaire contains questions that are comparable to questions on similar topics in other surveys. The following listing gives references to the SOA sections and items and to the comparable survey:

## SOA section and item number(s)

## Comparable study

N $\left.\begin{array}{cc}\text { Family Structure, Rela- } \\ \text { tionships, Support, and } \\ \text { Living Arrangements }\end{array}\right)$

SOA section and item number(s)-Con.

Comparable study-Con.

## 1986 NHANES

Epidemiologic Followup
Study
1978 Annual Housing Survey
1985 National Nursing
Home Survey
Survey of Income Program
Participants (SIPP)

0 Community and Social Support
4a-f-Social interaction 1976 National Survey of the Aged ${ }^{33}$
1986 NHANES
Epidemiologic Followup Study
P Occupation and Retirement
3a-b, 4, 5-Income excluding disability income

1982 Survey of Work Experience 1971-75 NHANES
1982-84 NHANES
Epidemiologic Initial Followup Study 1985 National Nursing Home Survey 1982 Survey of Work Experience 1971-75 NHANES
1982-84 NHANES
Epidemiologic Initial
Followup Study
1986 NHANES
Epidemiologic Followup Study
Q Conditions and Impairments 1a-f, 6a-c, 7a, b, 8Visual impairment

9a-c, 10a-c, 11Hearing impairment

12a-m, 13a-e-Selected health conditions

1977 NHIS, Vision
Supplement 1985 National Nursing Home Survey
1971-75 NHANES
1982-84 NHANES
Epidemiologic Initial
Followup Study
1986 NHANES
Epidemiologic Followup Study
1977 NHIS, Hearing
Supplement
1985 National Nursing
Home Survey
1984 NHIS condition lists 1985 National Nursing Home Survey
1971-75 NHANES

| SOA section and item number(s)-Con. |  | Comparable study-Con. |
| :---: | :---: | :---: |
|  |  | 1982-84 NHANES <br> Epidemiologic Initial Followup Study 1986 NHANES Epidemiologic Followup Study |
|  | 16a-e-NDI matching | National Death Index User File Format ${ }^{34}$ |
|  | Activities of Daily Living (ADL's) | 1985 National Nursing <br> Home Survey <br> 1971-75 NHANES <br> 1982-84 NHANES <br> Epidemiologic Initial <br> Followup Study <br> 1986 NHANES <br> Epidemiologic Followup Study |
| R2 | Instrumental Activities of Daily Living (IADL's) | 1971-75 NHANES <br> 1982-84 NHANES <br> Epidemiologic Followup Study <br> 1986 NHANES <br> Epidemiologic Followup Study |
| S | Nursing Home Stays, Help with Care, and Hospice |  |
|  | 1a-f-Nursing Home Stays | 1985 National Nursing Home Survey 1982-84 NHANES Epidemiologic Initial Followup Study |

SOA section and
item number(s)—Con. Comparable study-Con.


To produce the final version of the SOA Questionnaire (appendix II)-one that could be administered in a 25 -minute coherent, manageable interview that includes all eligible sample persons in a household and obtains information on a variety of topics pertinent to the objectives of the survey-required the efforts of one full-time and two part-time staff members of the Survey Planning and Development Branch, Division of Health Interview Statistics for 20 months. (See appendix VIII.)

## Chapter 3 Survey operations

## Data collection

Interviewing for the 1984 Supplement on Aging (SOA) was conducted by the U.S. Bureau of the Census, Field Division, in the standard face-to-face interviewing procedure for conducting the National Health Interview Survey (NHIS). (See reference 1 for a description of the NHIS procedures.) The SOA was administered in the 1984 NHIS sample households after the NHIS basic questions were asked of the household respondent about all the household members. Because the rule for the SOA was self-response if possible, sometimes the original respondent continued with the SOA and sometimes the respondent for the SOA was another person who had not participated in the household interview.

The interview period for the 1984 NHIS and SOA was January 9, 1984, through January 6, 1985, with interviewing conducted weekly throughout the year. Appendixes I and II contain the questionnaires used.

## Interviewer training

NHIS interviewer training is conducted by the U.S. Bureau of the Census, Field Division, and consists of two types:

- Initial training, which is the basic NHIS training for interviewers newly assigned to NHIS either from other U.S. Bureau of the Census surveys or as new employees. It is conducted periodically as the Bureau's Field Division acquires new NHIS interviewers.
- Group training, which is training conducted in weeklong classroom training sessions on the current year's special procedures and questions, including supplements. It is conducted for interviewers who have been working as NHIS interviewers for at least the past year. It is conducted at the beginning of the NHIS data collection year in January and again midway through the year.

In addition to classroom training, NHIS interviewer training includes home study, self-instruction exercises, and observed practice interviewing. Detailed interviewer instruction manuals are prepared for both the NHIS basic questionnaire and for the supplements.

For group training sessions covering a supplement or special topic questions, a training package is specially written by the U.S. Bureau of the Census. Specifications for the training and guidance for emphases in the classroom session and home study segments are provided by the staff of the Survey Planning and Development Branch, Division of Health Interview Statistics,
who participated in the development of the supplement (appendix VIII).

Training on the SOA for experienced interviewers consisted of $11 / 2$ days of group classroom sessions in January. Additionally, portions of a 2 -hour home study in March, a 3 -hour home study in June, and the 1 -day July group training were devoted to the SOA. Trained supervisors also trained interviewers as needed during the year. NCHS staff attended both the January and the July group training.

In addition to the training for experienced NHIS interviewers, the initial training-that is, the basic training on NHIS for new interviewers-was modified to accommodate the complex SOA. Historically, the initial training for NHIS interviewers takes about a full week and includes only $11 / 2$ days for any supplement to be covered. This basic training package was modified, and additional time was given for training new interviewers on the SOA. The procedures and concepts included in the SOA were more complex than usual, and they required thorough knowledge of the NHIS conventions and concepts to administer.

## Data collection

A total of 16,697 sample persons in the 39,996 households responding to the 1984 NHIS were selected for the SOA interview. The SOA interviews were completed for 96.7 percent of the sample, or 16,148 persons. Self-response, which was the primary respondent rule, accounted for 89.8 percent and proxy response, for 6.9 percent; 3.3 percent did not respond to the SOA. Less than 1 percent were partial interviews. Thus, the effective response rate was 96.7 (the SOA response rate) $\times$ 96.4 (the NHIS household interview response rate) $=93.2$ percent.

Data in table C summarize these results by quarter and show the breakdown of personal visit and telephone callback interviews.

Weekly monitoring of response rates for each of the census regional offices and the national total was conducted throughout the interviewing. The nonresponse rate at the outset of interviewing was 4.25 percent, and it increased to 5.88 percent for the first quarter. Reasons for nonresponse were analyzed from the interviewer memoranda that are required to explain noninterviews and from supervisors' monitoring interviewers with high noninterview rates. The problems of the combined length of the basic questionnaire and the SOA and the initial opinion of the interviewers that the basic questionnaire was more im-

Table C. Response rates for the Supplement on Aging (SOA), by quarter and type of response


'Outcome dispositions of "Temporarily absent" and "Mentally or physically incapable" were assigned only if there was no proxy respondent available.
${ }^{2}$ Because administrative data are used in this table, rates shown differ slightly from those in table D.
portant than the SOA (performance ratings were based on completed basic interviews only) were addressed.

Special procedures were implemented to reduce nonresponse. Procedures were implemented during the first quarter of the interviewing, and review of the problems and general instruction on nonresponse reduction was conducted in the July training sessions.

The procedure changes were:

- Changing the callback rule to accept proxy response after the second personal visit or the first telephone callback. This reduced the antagonism of initially willing proxies who were told at the early callback they could not be interviewed and then were asked for an interview at a later callback.
- Issuing a warning to interviewers not to take proxies simply to avoid refusals.
- Instructing interviewers to suggest calling back to continue, particularly for conducting the SOA, in situations where respondent fatigue was apparent.
- Stressing the importance of a smooth, inconspicuous transition from the NHIS basic interview to the SOA (they were separate questionnaires) and the technique of politely suggesting that a second SOA sample person might want to leave the room and return later as tools for keeping the refusal rate to a minimum.

The impact of providing special procedures to reduce nonresponse was apparent in the second quarter (April-June). The results, shown by quarter in table $C$, indicate that there was some increase in proxy interviews after the first quarter, but callback interviewing did not increase as much or as consistently with the new procedures. Self-response remained at about the same level throughout the interviewing periods.

An intense effort to reduce nonresponse was made by the U.S. Bureau of the Census field staff following the implementation of measures to address this problem. A lower nonresponse rate was achieved with implementation of the special proce-
dures and was maintained for the balance of the year, producing the SOA's final 3.29 percent noninterview rate. (For a discussion of issues in nonresponse applicable to the population of the SOA, see references 35 and 36.)

## Quality control: Data collection

Quality control procedures are followed in data collection, data preparation and coding, and in data editing stages of the survey operations. Additionally, the quality of the data itself is assessed through reinterviewing.

## Quality control procedures

The interviewer training program and the field quality control procedures are described in detail in other publications. ${ }^{1,14}$ Only a brief summary of the field quality control measures that applied to the NHIS basic interview and the SOA is presented here.

Observation of interviewers is an important procedure in the field. Each NHIS interviewer is observed in a group of households in his or her assignment by an interviewer supervisor or senior interviewer. An observation report is used to document the interviewer's performance. There are three types of observations:

- Initial observations are conducted on each interviewer newly assigned to NHIS for 2 days on his or her first interviewing assignment, for 1 day on the second assignment, and for part of a day on the first listing-of-addresses assignment. (An interviewing assignment is 1 week of sample, and it is to be completed within 2 weeks.)
- Systematic observations are conducted by supervisors on all interviewers. One-half of the experienced interviewers are observed each quarter, with the halves being rotated throughout the four quarters. Systematic observation is made on newly assigned interviewers during the first quarter following their initial assignment.
- Special-needs observations are made by supervisors when they determine through the field edit of completed questionnaires and other field monitoring that an interviewer might need more training.
Another quality control activity that is conducted both in field and in data preparation stages of the survey is the performance of several types of edits. Field edits are the initial edits conducted on the survey data. The three field edits are as follows:
- Interviewers are responsible for performing an edit of all work, prior to submitting it to the census regional office, including checks for completeness, consistency, and legibility of entries.
- The regional office staff performs further edit checks of the questionnaires submitted by the interviewers. Specifications are prepared by the staff of the Survey Planning and Development Branch of DHIS and the Health Surveys Branch staff of the U.S. Bureau of the Census (appendix VIII) for these regional office edits that determine the percent of work edited and the specific questionnaire content to be edited.
- If edit results or observation reports indicate errors, such as omissions or inconsistencies, additional editing of the individual interviewer's work is done by the census regional office staff.
Specifications for conducting these field edits require that the work of experienced interviewers receive more editing at the beginning of the data collection year when new items (or supplements) are first administered. As the year progresses, the percent of experienced interviewer work receiving field edit is reduced. For interviewers newly working on NHIS, the first four assignments are always edited by the regional office staff.


## Reinterviewing

Approximately 5 percent of all interviews are designated for reinterview. The reinterview serves as a check on interviewer performance and as a measure of the reliability and accuracy of the NHIS and SOA data.

The content of the reinterview is determined by the DHIS Survey Planning and Development Branch staff and, in 1984, included questions from both the NHIS basic questionnaire and the SOA. (See appendix IV for the content of the SOA reinterview.) For each household designated for reinterview, the subset of questions is asked (by telephone) by the interviewing supervisor within 2 weeks of the original interview. Responses are entered on a form specially designed for reinterviewing. Interviewers are not informed which households are reinterview households.

The reinterview sample is divided into two parts: an 80 percent subsample and a 20 -percent subsample. In the larger subsample, the supervisor carries out reconciliation of the reinterview results with the original interview results. In the smaller subsample, no reconciliation of differences is made. In the analWh: ysis of the reinterview data, the degree of inconsistency is determined by computer on the processed reinterview questionnaires.

## Quality control: Data processing and editing

Specifications for clerical editing and coding of the SOA data by the data preparation staff of NCHS were prepared by the Survey Planning and Development Branch design group, Division of Health Interview Statistics (appendix VIII).

Among the specifications for clerically editing and coding the SOA were:

- Cross-checks of identification information about the SOA sample person and other household data with the basic NHIS information.
- Codes and coding procedures for verbatim responses, such as codes for the equipment used in performing activities of daily living and for the relationships of contact persons with the sample persons.
- Edits of condition data entered from the NHIS basic questionnaire to the SOA.
- Edits of the sample recording and selection.
- Preparation of noninterview records.

Quality control of the coding of questionnaire information consists of recoding 10 percent of all questionnaires by two independent coders. Comparison of all three coding results are analyzed to determine if any coder exceeds the acceptable error level of no more than 5 percent of the coded items. Indication of coding errors requires the supervisor to conduct retraining or to review the code development with the questionnaire design staff to determine suitability of the codes.

The quality of the machine keying is maintained by a 100 percent independent key verification of all items in the questionnaires. After the data are on tape, a third type of edit, computer edits, is performed in the preparation of the final data tapes.

The computer edit checks for inconsistencies and invalid responses, provides algorithms for imputation, and generates recodes. The specifications for these computer edits are provided by data analysts of the Illness and Disability Branch, Division of Health Interview Statistics, who attend the pretests and the interviewer training and who work in conjunction with the DHIS questionnaire design specialists to ascertain the intent and meaning of the questions (appendix VIII).

The specifications for computer edits for the SOA included over 350 decision logic tables designed to perform automated tasks for checking the quality of the SOA data, checking its consistency with the NHIS basic questionnaire information, and developing recodes useful in analytic processing of the final user files.

The SOA data tapes contain the SOA interview information with the following record structure:

- A file of person records containing, for each person for whom an interview was completed, all items in the NHIS basic questionnaire that are on the person file, weights, all items in the SOA questionnaire (except the items used to permit matching to the National Death Index), special recodes, and selected condition and utilization information.
- A file of condition records, with identifiers that permit linkage to the person records, containing all conditions
mentioned in the SOA interview plus any condition for the individual that is related to a "limited activities" status from the basic NHIS questions. (Codes: Unable to perform major activity, Limited in amount or kind of major activity, Limitation in other activities, and Not limited, in position 71 on the SOA public-use person data tape.)
The detail of the content, coding, and structures of these two SOA data record types is contained in the public-use data tape documentation.

Among the computer editing of the SOA data and the preparation of the final files, the following two specific edits are of note because they make the data easier to use:

- The first of these is the addition to the SOA condition record, which contains reference to data on activities of daily living (ADL's) and on individual activities of daily
living (IADL's), of special condition information that was reported for the SOA sample person with the ADL or IADL trouble. The special information is abbreviated data on the condition, or conditions, given in the interview as the source of trouble when performing the ADL or IADL. Included in the special ADL or IADL related condition information is the condition serial number, the International Classification of Diseases (ICD) code, ${ }^{37}$ an acute or chronic code, hospitalization information, how long the person had the condition, and the date of the last doctor visit for the condition.
- The second is the inclusion in the condition record file information obtained from the basic interview about the SOA sample person that indicates whether the sample person has any limitation of activity and what condition causes that limitation.


## Chapter 4 Analysis of SOA data

## Estimation

## Weights

The National Health Interview Survey (NHIS) is designed to produce estimates for the civilian noninstitutionalized population residing in the United States. Therefore, the data must have weights to inflate the sample numbers to the national estimates. These weights are on all public-use data tapes.

When creating the weights, the 52 weeks of data collection in a year are viewed as the consolidation of four quarters of 13 weeks each. Each quarter is a national sample and the quarter is the fundamental unit for weighting.

The basic weight for each quarter is the product of four factors

- The inverse of the probability of selection at each stage of selection (PSU, segment, household).
- A noninterview adjustment at the segment level.
- A first-stage ratio adjustment.
- A poststratification adjustment to 60 age-race-sex population totals that are provided by the U.S. Bureau of the Census for each quarter.
(A more complete discussion can be found in reference 1.)
The weights for the basic NHIS were not sufficient for the SOA, however, for two reasons:
- The sample for people ages 55-64 years was only a half sample.
- There was, as described in chapter 3, an additional nonresponse on the SOA.
Therefore, the NHIS weights for each quarter were multiplied by an additional factor to poststratify the SOA to the NHIS basic data using the 16 poststratification cells for people ages 55 years and over shown in figure 2 . This was the equivalent of repeating the fourth factor for the SOA. The result is that the national estimates, when the weights on the SOA tape


Figure 2. Poststratification cells for the Supplement on Aging
are used, are precisely the same for each of the specified age-sex-race cells as they are when estimated from the NHIS basic data tape. As shown in table D, response rates were lower for people under 65 years of age than for people age 65 years and over, and they were lower in the first than in subsequent quarters. However, as shown in table E, the estimated population in each quarter and in each age, sex, and race group is the same when derived from either the basic NHIS or the SOA despite the difference in the number in the sample.

The differences in the weights on the SOA tape are transparent to the user. The weights for persons ages 65 years and over are similar to those on the basic tape because only the additional nonresponse had to be taken into account. The weights for persons ages 55-64 years are approximately twice as large as those on the basic tape or for people ages 65 years and over because of the half sample in the SOA for people in that age group (appendix VI, table I).

The user who links data from the NHIS basic data files to the SOA files should remember to use the weights on the SOA files instead of those on the basic data tapes.

## Point estimates

National estimates for most data can be made by using the appropriate weight as a multiplier for each record. The basic unit for the weights is a quarter, and the files are constructed so that estimates can be made for any quarter. If only one quarter of data is used, the final basic weight will produce the national estimate of the population for that quarter by any characteristic, and the weights for events will produce the national estimates of the number of events that occurred during the quarter. If two quarters of data are used, the population estimates must be averaged, but the events are summed so that all events occurring during the 6 months are counted. If four quarters (the full year of the SOA) are used, the populations are averaged over the four quarters, and the events are summed to give a count of all events occurring during the year. The weights that average the populations and sum the events are on the data tapes.

Analyses could be done using only the final basic weight for the quarter in tape location 201-209 and the 6.5 weight in tape location 228-236. (Because the data are based on a 2 week recall period and there are 13 weeks in a quarter, each event must be multiplied by 6.5 to estimate the number of such events in 13 weeks.) However, there are also weights that average the population if more than one quarter of data is used and there are weights formed by multiplying the frequency count of events by the weight that is appropriate for the recall period.

Table D. Number of persons in the National Health Interview Survey (NHIS) and Supplement on Aging (SOA) samples and Supplement on Aging response rates, by selected characteristics

| Characteristic | NHIS | SOA | SOA <br> response <br> rate |
| :--- | :--- | :--- | :--- | :--- |



| Age |  |  |  |
| :---: | :---: | :---: | :---: |
| 65-74 years. | 7,344 | 7,093 | 0.96 |
| 75-84 years. | 3,698 | 3,578 | 0.97 |
| 85 years and over | 852 | 826 | 0.97 |


| Quarter |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Jan.-Mar. |  | 2,887 | 2,717 | 0.94 |
| Apr.-June. |  | 3,095 | 3,002 | 0.97 |
| July-Sept. |  | 2,961 | 2,895 | 0.98 |
| Oct.-Dec. |  | 2,951 | 2,883 | 0.98 |
| Sex |  |  |  |  |
| Male |  | 4,829 | 4,643 | 0.96 |
| Female |  | 7.065 | 6,854 | 0.97 |


| Race |  |  |  |
| :---: | :---: | :---: | :---: |
| Other than black. | 11,002 | 10,642 | 0.97 |
| Black. | 892 | 855 | 0.96 |
| Family in household |  |  |  |
| Alone | 3,726 | 3,655 | 0.98 |
| Unrelated person only | 137 | 134 | 0.98 |
| Spouse only | 6,408 | 6,162 | 0.96 |
| Other relatives | 1,623 | 1,546 | 0.95 |
| Health status |  |  |  |
| Excellent. | 1,876 | 1,816 | 0.97 |
| Very good | 2,400 | 2,335 | 0.97 |
| Good | 3,727 | 3,602 | 0.97 |
| Fair | 2,497 | 2,419 | 0.97 |
| Poor | 1,334 | 1,274 | 0.96 |
| Unknown | 60 | 51 | 0.85 |
| Limitation of activity |  |  |  |
| Unable to perform major activity. | 1,285 | 1.229 | 0.96 |
| Major activity, limited | 1,659 | 1,619 | 0.98 |
| Outside activity. limited. | 1.707 | 1,667 | 0.98 |
| No limitation. | 7,243 | 6,982 | 0.96 |
| Hospital episodes |  |  |  |
| 0 | 9,535 | 9,234 | 0.97 |
| 1 | 1,659 | 1,593 | 0.96 |
| 2 or more | 700 | 670 | 0.96 |

${ }^{1}$ Response rates assume that one-half of the NHIS people ages $55-64$ years were selected for the Supplement on Aging.

The estimates and tape locations of appropriate weights are

## Estimate <br> Tape location

1. Population by any characteristic

| One quarter of data | $201-209$ |
| :--- | :--- |
| 6 months of data | $210-218$ |
| 1 year of data | $219-227$ |

Table E. Sample numbers and population estimates for persons ages 55 years and over, by selected characteristics: National Health Interview Survey (NHIS) and Supplement on Aging (SOA), 1984

| Characteristic | NHIS | SOA | NHIS | SOA |
| :---: | :---: | :---: | :---: | :---: |
|  | Sample number in units |  | Population estimate in thousands |  |
| Total. | 21,746 | 16,148 | 48,485 | 48,485 |
| Age |  |  |  |  |
| 55-64 years | 9,852 | 4,651 | 22,053 | 22,052 |
| 65-74 years | 7,344 | 7,093 | 16,287 | 16,288 |
| 75-84 years | 3,698 | 3.578 | 8,252 | 8,249 |
| 85 years and over | 852 | 826 | 1,893 | 1,897 |
| Quarter |  |  |  |  |
| Jan.-Mar. | 5,365 | 3.909 | 12,071 | 12,071 |
| Apr.-June | 5,493 | 4,129 | 12,101 | 12,101 |
| July-Sept. | 5,522 | 4,101 | 12,136 | 12,136 |
| Oct.-Dec. | 5,366 | 4,009 | 12,178 | 12,17.7 |
| Sex |  |  |  |  |
| Male | 9,405 | 6,793 | 21,073 | 21,072 |
| Female | 12,341 | 9,355 | 27,412 | 27,413 |
| Race |  |  |  |  |
| Other than black | 20,042 | 14,931 | 44,234 | 44,255 |
| Black. | 1.704 | 1.217 | 4,159 | 4,159 |
| Family in household |  |  |  |  |
| Alone | 5,066 | 4,289 | 11,312 | 11,414 |
| Unrelated person only. | 255 | 188 | 589 | 582 |
| Spouse only. | 13,860 | 9,712 | 30,887 | 30,997 |
| Other relative | 2,565 | 1.959 | 5,698 | 5,492 |
| Health status ${ }^{1}$ |  |  |  |  |
| Excellent | 4,035 | 2,826 | 9,010 | 8,954 |
| Very good. | 4,628 | 3,369 | 10,393 | 10,342 |
| Good. | 6.760 | 5,030 | 15,051 | 15,068 |
| Fair | 4,053 | 3.188 | 8,953 | 9,103 |
| Poor | 2,161 | 1,665 | 4,835 | 4,820 |

Limitation of activity
nable to perform major

| Unable to perform major activity | 2,403 | 1,755 | 5,367 | 5,329 |
| :---: | :---: | :---: | :---: | :---: |
| Major activity, limited | 2,789 | 2,169 | 6,168 | 6,260 |
| Outside activity, limited | 2,345 | 1,985 | 5,202 | 5,321 |
| No limitation | 14,209 | 10,239 | 31,749 | 31,576 |
| Hospital episodes |  |  |  |  |
| 0 | 18.159 | 13.297 | 40,522 | 40,534 |
| 1 | 2,572 | 2,018 | 5,706 | 5,651 |
| 2 or more | 1,015 | 833 | 2,257 | 2,299 |

${ }^{1}$ Responses of "don't know" are not shown separately.
NOTE: Sample numbers should not be used to compute response rates because of the half sample for ages 55-64 years.

Estimate-Con.
2. 12-month recall

| Hospital episodes <br> Hospital days: | $327-335$ |
| :--- | :--- |
| $\quad$ Quarter | $300-308$ |
| Semiannual | $309-317$ |
| Annual | $318-326$ |
| Doctor visits: |  |
| Quarter | $273-281$ |
| Semiannual | $282-290$ |
| Annual | $291-299$ |

## Estimate-Con.

3. 2-week recall

| Restricted activity days | $237-245$ |
| :--- | :--- |
| Bed disability days | $246-254$ |
| Work-loss days | $255-263$ |

The frequency of the 12-month and 2-week recall events has already been multiplied by the appropriate factor, and the weight given above is a variable-specific weight. This enables the user to obtain precisely the same estimates that appear in NHIS publications without making assumptions about what to do about persons for whom some part of the information is unknown. For example, these weights take care of cases where the week of the doctor visit is unknown and cases where it is known that the person had days in bed but the number of days is unknown. When using these weights, do not use the variable itself as a multiplier; if the variable is used, the variable component will be squared. It is suggested that users compare their estimates with the estimates published by NCHS to verify the use of the correct weights.

Weights where the frequency has already been multiplied by the appropriate weight are those in tape locations 237-335, and they are labeled with the variable name.

Alternatively, the user can create a new weight by multiplying the frequency of the variable by the appropriate weight. This is the only approach for variables such as the number of hospital discharges and their associated days or the number of acute conditions. These variable-specific weights are not on the SOA tapes because the staff of the Division of Health Interview Statistics uses the hospital or condition tapes to make estimates, and the weights are on those tapes for the basic NHIS.

Because the recall period for hospital discharges and the associated days is 6 months, the semiannual weight in tape locations 210-218 should be used. Multiplying the number of discharges in tape locations 132-133 by the weight will produce the annual estimated number of discharges.

A 2-week recall is used for acute conditions. Therefore, the correct weight is the 6.5 weight.

Tape locations for weights and frequency counts are

|  | Tape location |
| :---: | :---: |
| Estimate | Weight Frequency |

1. 12-month recall

Hospital episodes
Hospital days
219-227 122-123
219-227 124-126
2. 6-month recall

Hospital discharges $\quad 210-218 \quad 132-133$
Discharge days 210-218 134-136
3. 2-week recall

Restricted activity days 228-236 98-99
Bed-disability days
Work-loss days
Acute conditions
Doctor contacts

## Examples of national estimates

To obtain the national estimate of the population in any quarter, select the quarter using tape location 5 , and multiply
each record in the quarter by the weight in tape locations 201209.

To obtain the national estimate of the number of people in the year, multiply each record in the entire file by the weight in tape locations 219-227.

These are the weights used for estimates for the number of people by any population characteristics, such as age, race, sex, people limited in activity, people with one or more limitations in activities of daily living, people with one or more children, people married or widowed, or people living in a retirement complex.

To obtain the national estimate of the number of bed days in any quarter, select the quarter using tape location 5 and accumulate the weights in tape locations 246-254. Alternatively, multiply each record by the 6.5 weight in tape locations 228-236 and by the frequency of bed days in 2 weeks in tape locations 100-101.

To obtain the national estimate of the number of bed days in the year, multiply each record in the entire file by the same weight, the one in tape locations 246-254. Alternatively, multiply by the 6.5 weight and the frequency.

Using the weight in tape locations 237-245 will produce the number of restricted activity days for a quarter if only a quarter of data is used, for 6 months if 6 months is used, or for the year if all records are used. The alternative is the same as that given above for bed days except that the frequency count is in tape locations 98-99. In each case, national estimates are produced, but the user can examine seasonal variation in the items with a 2-week recall period.

Examples using the $\mathbf{S A S}^{38}$ are given in appendix VII.

## Variances

Because of the complex sample design of the NHIS, there is clustering in primary sampling units (PSU's), in segments, and in households. The clustering, which is done to reduce costs and make such national surveys possible, usually results in variances that are larger than those that would have been obtained if the NHIS had been based on a simple random sample.

This clustered design produces problems for many users who are accustomed to using programs, such as the SAS ${ }^{38}$ and Statistical Package for the Social Sciences (SPSS), ${ }^{39}$ that assume simple random sampling for all variance estimates used for confidence intervals or tests of significance.

There are a number of alternative ways of dealing with incorporating the variances in design-based analysis.

## Curves of relative standard errors

The Division of Health Interview Statistics uses curves of relative standard errors for all analyses in Series 10 publications. ${ }^{1}$ The curves for 1984 are in Vital and Health Statistics, Current Estimates $1984 .{ }^{14}$

These curves in that report can be used without modification for data on persons ages 65 years and over. They must be adjusted for persons ages 55-64 years because of the half sample. The relative standard errors for data for people ages 55-64 years can be adjusted reasonably well by multiplying by the square root of 2 , that is, approximately 1.4 .

In using these curves, one must assume that covariances are zero. Such an assumption will result in an overestimate if the variables are positively correlated and an underestimate if they are negatively correlated.

## Design effects

The analyst can use design effects to adjust the results from analyses that were based on the assumption of simple random sampling. The design effect is defined as the variance from the complex sample divided by the variance of a simple random sample of the same size. For standard errors the square root of the design effect is used.

Some selected design effects for data on the SOA are given in appendix VI, table II. They are relatively small. Most are less than 1.5 , which means that the standard error would be about 23 percent larger than if the SOA had been based on a simple random sample of the same size. That is, the complex sample design did not markedly increase the variance estimates that would have been obtained under simple random sampling. The relatively small design effects occur because, in general, older people do not tend to cluster. They tend to be distributed throughout communities rather than living in one particular area, and they tend to live alone or with only one other person. Moreover, they tend to have chronic conditions, and their disability is associated with chronic conditions. There is relatively less geographic or household clustering of chronic conditions than of acute conditions. Thus, there is little clustering in PSU's, segments, or households.

There may also be a social effect that counteracts potential household clustering. Two older people who are both disabled may not live together because of inability to care for one another.

The user should not assume that design effects are always small. Some design effects are relatively large for the SOA variables. In the NHIS they are large for many of the characteristics of children. People with small children tend to live in recently constructed housing and, therefore, there is geographic clustering. They tend to have more than one child and, therefore, there is household clustering, especially if the analyst is using a large age group such as school-aged children. Also, acute conditions are more common among children and, given that many acute conditions (and the disability days associated with them) are communicable diseases, acute conditions will cluster more than the chronic conditions (and disability days associated with them) that are characteristic of older people.

## Calculating variances

There are several approaches currently used to calculate variances for data from samples with complex sample designs. They are:

- Taylor linearization.
- Balanced half sample replication (BRR).
- Jackknife procedures.
- Bootstrap procedures.

There is an extensive survey research literature on these approaches that should be investigated by the interested user. ${ }^{40,41}$ (A good place to begin is with the Proceedings of the Survey

Research Section of the American Statistical Association.) However, the general reader needs only to know that

- They are asymptotically similar.
- The first three have been used in publications from the National Center for Health Statistics.
- There are only a few widely available software programs to use any of them.

The general user who does not have access to someone to write variance programs is confined to one of the commercially available programs. There are, as far as the authors know, only three supported software packages. They are:

- The packages available through the Research Triangle Institute (RTI). All run under SAS and use standard SAS statements. There are three programs, SESUDAAN, SURREGR, and RATIOEST. ${ }^{42-44}$ They are separate packages that perform different functions. All are based on Taylor series approximations.
- The programs available through the University of Michigan. These run under OSIRIS and use OSIRIS statements. ${ }^{45}$ They are all incorporated in the complete OSIRIS package. Some, such as PSALMS, are based on Taylor series approximations and some, such as REPERR, are based on half-sample replication.
- The program, SUPERCARP, available through the University of Iowa. ${ }^{46}$ This program also uses the Taylor series approximation.

SUPERCARP, called PC CARP, is also available for microcomputers. ${ }^{46}$ The others are not available for microcomputers.

There are a number of other programs in use by specific research organizations or Federal agencies. Some of them have advantages that the commercially available programs may not have. For example, the BRR program of the National Center for Health Statistics takes poststratification into account.

A recent study on ease of use ${ }^{47}$ indicates that the programs from the Research Triangle Institute (RTI) take fewer input statements from the programmer, and they take less computer time than the OSIRIS or SUPERCARP programs or the BRR program developed at the NCHS.

They also run under SAS, which many people have available; have generally good regression programs; ${ }^{43}$ and are statistically well designed.

Therefore, the users should evaluate what is available, the environment in which they operate, and choose the program that is easiest to use under that environment.

The examples in this report are based on the RTI programs in the SAS environment because

- They are available at the National Center for Health Statistics. This includes the availability of the program GENCAT that can be used for categorical data analysis.
- They offer the possibility of downloading a variance-covariance matrix to a personal computer and using PC SAS ${ }^{48}$ for final analysis.


## Considerations of sample design

The NHIS sample design in use in 1984 consisted of 376 primary sampling units (PSU's), ${ }^{1}$ one in each stratum. All variance programs assume that there were two PSU's in each stratum. It was necessary, therefore, to create pseudo-PSU's and strata for the calculation of variances. The 298 pseudo-PSU's are in tape locations 187-189 on the SOA public-use data tapes. The user should form pseudostrata by pairing adjacent pseudo-PSU's. For example, PSU's 1 and 2 form stratum 1, PSU's 3 and 4 form stratum 2, and so forth.

The SAS statements for forming the strata are in appendix VII.

A serious problem for the analyst who wishes to estimate. variances or covariances is that, because the NHIS is essentially a self-weighting sample and because the population of the United States is not equally distributed among geographic areas, there are PSU's that have no sample persons in particular subdomains of interest. There are, for example, 61 pseudoPSU's that have no one in the sample who is 85 years or over (appendix VI, table III). There are PSU's that have no black males ages 65 years and over, and there are certainly PSU's that have no one with the characteristic of interest for other analyses.

One method of dealing with this problem is to collapse PSU's and strata, that is, to combine them so that each PSU has at least one sample person with the characteristic of interest.

If the analysis of interest is focused on only one population characteristic for which there is a problem, such as an analysis of data about people ages 85 and over, the analyst can investigate the distribution of the sample by pseudo-PSU's and combine only those where it is necessary. This will preserve as much of the sample design as feasible. If the analysis uses several such characteristics, more combining may be needed. This should be done with great care to preserve the sample structure.

There is, as far as the authors know, little published literature on the impact of extensive combining of strata, but some investigation at the NCHS suggests that the effect on the variances may be minimal.

## Strategies for analysis

After the analyst feels comfortable with the structure of the data file and the way the questions have been translated into variables on the tape, the analysis of the SOA data can be approached in three stages. First. investigate the data without weights as if they were derived from a simple random sample. Second, incorporate the weights to make national estimates. And finally, incorporate both weights and the complex sample design. The three stages are shown in figure 3.

## Relationship between the questionnaire and the data

The National Health Interview Survey (NHIS) is a complicated survey, and the variables on the public-use data tape reflect that complexity. It is a good idea for the user to check the variables on the SOA tape against the questions on the

|  |  |  | Inclusion of |  |
| :--- | :--- | :--- | :--- | :---: |
|  | Type of <br> analysis | Sample weights | Complex <br> sample design |  |
|  | Preliminary | No | No |  |
| 1 | Weighted | Yes | No |  |
| 2 | Final | Yes | Yes |  |
| 3 |  |  |  |  |

Eigure 3. Stages for the analysis of data from a survey with a complex sample design
questionnaire to learn how the questions were translated into data.

There are many skip patterns on the questionnaire, that is, the answer to one question leads the interviewer to one of several choices for the next question. An answer of "No" or "Don't Know" frequently results in subsequent questions on the topic being skipped. Because the questions were not asked, the entry on the tape is a blank. The blank means that the question was not asked because it was not relevant; it does not mean that the data are missing.

For example, if the answer to the first question for each activity of daily living (ADL) about whether the person has any difficulty was "No," "Doesn't do for another reason," or "Don't Know," all of the rest of the questions about that ADL were skipped, and the interviewer started with the next ADL. The entries on the data tape for the subsequent questions relating to that ADL are blanks.

There are many other such examples. Questions about children were asked only if there were children. Questions about retirement were asked only if the person had ever worked. The questions in the section on Health Opinions in SOA Section T were asked only of self-respondents.

The number of the question that is the source of the data is on the public-use tape to make it easy to refer to the questionnaire for the specific question. However, if there was a question that determined whether the question of interest was asked, it is earlier on the questionnaire. Sometimes it is a checkbox that the interviewer marked on the basis of a much earlier question. It is advisable to search for such questions and checkboxes, especially if there appear to be many blank responses.

## Preliminary analysis

Although the SOA was designed to make national estimates, much preliminary investigation can be done on the basis of the sample counts. The National Health Interview Survey is essentially a self-weighting survey; ${ }^{49}$ there was no oversampling in 1984, and there was no subsampling on the SOA except for the half sample of people ages 55-64 years.

Preliminary, exploratory analysis at this stage has many advantages. There is a great deal of information on the SOA and many variables and possible combinations of variables. Computer programs for simultaneously examining a number of variables under the assumption of simple random sampling are widely available. Using these programs, the user can examine a lot of information, rank the variables in importance according to some predetermined, usually relaxed criterion, and retain only those which may statistically differentiate in later analysis.

The preliminary analysis using sample counts also informs the user about the sample size in each cell; this information is essential for making decisions about the final analysis.

At this stage, estimates of the number of events have little meaning. Because of the recall periods used for some of the NHIS questions, the user must be extremely careful in interpreting data unless a weight is used. For example, 2-week recall questions are used to make estimates of the number of events during a 13 -week quarter. The number of, say, contacts with a doctor in the past 2 weeks must be multiplied by 6.5 to produce that quarterly estimate and then summed over the four quarters to produce the annual estimate.

It can be seen from table I' of appendix VI that, except at the extremes of the distribution, there is not much variation in the population weights among people ages 55-64 years or among people ages 65 years and over. Therefore, relationships among the variables relating to characteristics of persons can be investigated with a fair degree of certainty that those relationships will hold for the national estimates as long as there is a control for the half sample for ages 55-64 years. Because variance from a sample with a complex design are, on the average, larger than those for a simple random sample of the same size, relationships that are not significant at this stage are not likely to be significant when the complex design is taken into account.

## Weighted analysis

Although most computer packages have an option for including weights, the user has to be careful to use the weight that is appropriate for each variable. The weights that are on the public-use data tapes were discussed in some detail previously in this section, and examples of their use are given in appendix VII. Using them is essential if the analyst wishes to make inferences about the population of the United States.

Analysts using standard computer packages and weighted data need to remember that most programs assume that the weighted population estimate is the sample size when they calculate the test statistics. Therefore, when weights are used, the statistical levels are no longer valid.

## Final analysis

The final analysis should incorporate both the weights and the complex sample design. The weights are needed to make the point estimates for the population of inference. The complex sample design should be incorporated so that the statistical inferences will be appropriate.

More detailed discussion of these strategies for analyses can be found in Series 2, No. 92 and Series 1, No. 19 of Vital and Health Statistics. ${ }^{49,50}$

## Chapter 5

## Differences between data files

from the 1984 NHIS Basic Questionnaire and the Supplement on Aging

## Weights

The weights on the Supplement on Aging (SOA) files differ from those on tapes from the basic NHIS as discussed in chapter 4.

The SOA was poststratified to the National Health Interview Survey (NHIS) for the 16 cells ( 4 age $\times 2$ sex $\times 2$ race) used for poststratification of the NHIS. Therefore, population estimates for those 16 cells are the same except for rounding.

The weights for persons ages 65 and over are slightly larger on the SOA files than on the files from the basic questionnaire. The weights for persons ages 55-64 are slightly more than twice as large.

## Respondents

## NHIS basic respondent rule

The basic NHIS interview is conducted with an adult member of the household who is knowledgeable about the health of the household members. This individual is usually an adult female household member.

In addition to this basic respondent rule, the NHIS procedure allows for participation in the NHIS basic interview by other household members present at the time of the interview.

Generally, the NHIS basic interview is conducted with one individual as the household respondent.

The basic NHIS interview also has a reference person designated among the household members. This individual is one of the household members who owns or rents the dwelling unit. The reference person is designated primarily as the basis for enumerating household membership; relationships for household members are given in relation to the reference person.

In households where there was an SOA sample person, the basic NHIS information was collected from persons other than the SOA sample person in 17.1 percent of the interviews.

## SOA respondent rule

For the SOA, self-response by the selected sample person was the respondent rule. The selected sample person was sought for interview by callback, if necessary. An attempt was made to interview the sample person alone; a suggestion was made that a second sample person might wish to leave and be interviewed after the first. Similarly, it was suggested that other household members might not wish to be present. However, Wh. the practical situation, particularly in SOA households with two or more eligible sample persons of older ages, was such that both sample persons were usually present during interviews.

The SOA response rule allowed for proxy response in those instances where sample persons were mentally or physically unable to respond for themselves or when the sample person was absent during the period of data collection. Of the SOA interviews, 8.5 percent were conducted with a proxy respondent. There was a difference in the percent who responded for themselves after the first quarter for the reasons discussed in chapter 3, Data collection. SOA data users should note that younger people and people without limitations in ADL's and IADL's were likely to answer the questions for themselves (table F).

A cross-classification of self-response and proxy response to the SOA by self-response and proxy response to the basic NHIS interview is shown in table G.

## Conditions

## Condition lists

In the NHIS, six condition lists (one for each body system) are printed on the questionnaire. One list of the six is used for each household. Therefore, the effective sample used to estimate the prevalence of chronic conditions is only one-sixth of the 42,000 households.

In contrast, only one list of chronic conditions was used in the SOA.

The condition list used for the SOA was a compilation of conditions from the six condition lists in the NHIS basic questionnaire that are most prevalent among people ages 55 year or over. The interviewer read the entire list aloud. The respondent had to answer whether or not the sample person had each condition on the list. This differed from the NHIS basic interview wherein only one of the six lists is administered in each household.

This use of one list should result in more reliable estimates of prevalence for persons ages 55 years and over from the SOA than from the NHIS basic data. It also yields the ability to investigate multiple conditions.

Conditions in the SOA, as in the NHIS basic questionnaire, were also derived from responses to questions in addition to those on the condition list, such as cause of trouble with the ADL's and IADL's.

## Conditions on the condition file

Only conditions mentioned in response to questions on the SOA are on the SOA condition tape, with one exception. The exception is that conditions mentioned in response to limitation

Table F. Number and percent of self-responses to the Supplement on Aging and number of proxy responses, by selected demographic and health characteristics

| Characteristic | Type of response |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Total | Selfresponse | Proxy response | Selfresponse |
|  | Number of interviews |  |  | Percent |
| Total | 16.148 | 14,783 | 1,365 | 91.5 |
| Quarter |  |  |  |  |
| Jan.-Mar. | 3,909 | 3,631 | 278 | 92.9 |
| Apr.-June | 4,129 | 3,792 | 337 | 91.8 |
| July-Sept. | 4,101 | 3,719 | 368 | 90.7 |
| Oct.-Dec. | 4,009 | 3,641 | 368 | 90.8 |
| Age |  |  |  |  |
| 55-64 years. . | 4,651 | 4,284 | 367 | 92.1 |
| 65-74 years. | 7.093 | 6,643 | 450 | 93.7 |
| 75-84 years. | 3,578 | 3,250 | 328 | 90.8 |
| 85 years and over | 826 | 606 | 220 | 73.4 |
| Sex |  |  |  |  |
| Male | 6.793 | 6.030 | 763 | 88.8 |
| Female | 9,355 | 8.753 | 602 | 93.6 |
| Living arrangement |  |  |  |  |
| Alone | 4,289 | 4,206 | 83 | 98.1 |
| With others | 11,859 | 10,577 | 1.282 | 89.2 |
| Number of ADL's ${ }^{1}$ with difficulty |  |  |  |  |
| 0 | 12,893 | 12,159 | 824 | 93.7 |
| 1 | 1,317 | 1,187 | 130 | 90.1 |
| 2 | 646 | 553 | 93 | 85.6 |
| 3 | 403 | 343 | 60 | 85.1 |
| 4 or more | 799 | 541 | 258 | 67.7 |
| Receives help with 1 or more ADL's ${ }^{1}$ |  |  |  |  |
| 0 | 14,853 | 13,901 | 952 | 93.6 |
| 1 | 526 | 430 | 96 | 81.7 |
| 2 | 255 | 178 | 77 | 69.8 |
| 3 or more | 514 | 274 | 240 | 53.3 |
| Number of IADL's ${ }^{2}$ with difficulty |  |  |  |  |
| 0 | 12,360 | 11,622 | 738 | 94.0 |
| 1 | 2,113 | 1,964 | 149 | 92.9 |
| 2 | 586 | 522 | 64 | 89.1 |
| 3 | 325 | 261 | 64 | 80.3 |
| 4 or more | 764 | 414 | 350 | 54.2 |
| Receives help with 1 or more IADL's ${ }^{2}$ |  |  |  |  |
| 0 | 13.040 | 12,270 | 770 | 94.1 |
| 1 | 1,689 | 1,557 | 132 | 92.2 |
| 2 | 484 | 417 | 67 | 86.2 |
| 3 or more | 935 | 539 | 396 | 57.6 |

${ }^{1}$ Activities of daily living.
${ }^{2}$ Instrumental activities of daily living.
of activity questions in the NHIS basic interview are also on the SOA condition file. As a result, almost all conditions on the SOA tape are chronic conditions. Acute conditions mentioned in response to NHIS basic questions about restriction of activity or physician visits within the previous 2 weeks are not

Table G. Number and percent of self-responses to the Supplement on Aging (SOA) and number of proxy responses, by type of response to the National Health Interview Survey (NHIS) basic questionnaire

| Type of response to NHIS basic questionnaire | Type of response to SOA |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Total | Selfresponse | Proxy response | Selfresponse |
|  | Number of interviews |  |  | Percent |
| Total | 16,148 | 14,783 | 1,365 | 91.5 |
| Self. | 13,301 | 12,953 | 349 | 97.4 |
| Entirely | 12,296 | 12,066 | 230 | 98.1 |
| Partly | 1,005 | 887 | 118 | 88.3 |
| Not recorded | 86 | 61 | 25 | 70.9 |
| Proxy. | 2,761 | 1,769 | 992 | 64.1 |
| Percent self- |  |  |  |  |
| response. . | 82.4 | 87.6 | 25.5 | 80.2 |
| Entirely. | 76.1 | 81.6 | 16.8 | 74.7 |

on the SOA condition file. The user who wishes to use them will have to match to the basic NHIS questionnaire condition file.

A count of the number of acute conditions is on the SOA person file in tape locations 118-119. There will generally not be records on the SOA condition file for these conditions.

## Family relationship and number of persons

## Family relationship

There are two differences in the information about relationships in the SOA and the NHIS basic interview. These differences are:

- The relationships of household members in the SOA are relationships to the SOA sample person.
- The relationships in the SOA are relationships for all household members, not only family members of the SOA sample person.

In the NHIS basic interview, family membership and relationships are determined in relation to the reference person. As indicated previously, this individual is an adult member of the household who owns or rents the dwelling unit. Membership and relationship designations are listed only among those persons related by blood, marriage, or adoption. Members of the household who are not related to the reference person (individuals for whom a separate basic NHIS questionnaire is used) constitute a separate family group from those in the initial questionnaire. Consequently, the relationships of these individuals are determined in relation to the reference person in the second (or subsequent) family group.

In contrast, in the SOA the relationships of all household members are shown to the SOA sample person regardless of who owns or rents the dwelling unit (that is, the NHIS reference person). This relationship information in the SOA was obtained from the SOA respondent, who was usually the SOA sample person. All household members were listed and relationship to the SOA sample person indicated.

Because the family composition is determined in the NHIS basic interview in a way that could exclude possible household members who are closely associated with or even responsible for the SOA sample person, the SOA interview relisted family
members, added unrelated household members to the list, and, consequently, showed relationships of all household members, both family and unrelated, to the SOA sample person.

## Number of persons in the family

The number of persons in the family living in the household, the individual's marital status, and several other such items that can be derived from either the basic NHIS questions or SOA questions do not agree perfectly.

There are several reasons

- The NHIS is a survey of the civilian noninstitutionalized population. If a person listed as living in the household is found to be a member of the Armed Forces on active duty or currently in an institution such as a nursing home, that person is deleted from the NHIS basic household roster. On the basic NHIS, family size and family relationships are coded as if that person does not live in the household. On the SOA, where a much more extensive list of questions about relationships was asked, such a person was retained on the list of household members for relationship coding to the SOA sample persons; and relationships given are the respondents' answers. The codes to indicate relationship on the SOA were the same codes used for coding relationships in the basic NHIS.
- The respondents to the basic household interview and the SOA were not always the same person. A higher proportion of the respondents to the SOA were self-respondents. They could, and in some cases did, give different answers.
- Despite editing and verification, there are interviewer and coder errors on the NHIS. Most are caught and resolved; a few probably remain.
The differences in family size are small (only 2 percent of the person records differ, and almost all of those by only 1 percent), but the analyst should know that they exist and decide which to use. The decision may depend on the analysis of interest.

In general, it is believed that the SOA responses are more accurate. The sOA respondent may know about a marriage long ago that the basic NHIS household respondent did not know about. Conversely, an extremely old person answering the SOA could have been confused or misunderstood the question. This possibility was minimized by using proxy respondents.

For consistency with other data from the NHIS, the NCHS staff uses family size and whether the person was living alone as they are reported on the basic NHIS questionnaire. In any analysis, data from the basic questionnaire should be used for control variables if the analyst wishes to make comparison with other NHIS data.

The Supplement on Aging (SOA) was designed as a baseline study for the Longitudinal Study of Aging (LSOA). Specific information was included in the questionnaire to enable followup of the sample persons (appendix II). This included

- Questions asking for the name, address, and telephone number of a person who would know where the sample person would be in the future if the sample person was not available at the 1984 location.
- Questions that provided information necessary to perform matches with the National Death Index.

In addition, the sample persons were informed at the time of the 1984 interview of the intention to recontact them in the future.

NCHS is conducting the LSOA in conjunction with the National Institute on Aging. The study includes, in addition to the information secured from matches with the National Death Index, reinterviews with those sample persons, or their proxies, who were living in 1986 and will include those alive in 1988.

## Followup through the National Death Index

The National Death Index (NDI) is a central, computerized index of death record information compiled from magnetic tapes submitted under contractual arrangements to the National Center for Health Statistics (NCHS) by the State vital statistics offices. These tapes (beginning with deaths occurring in 1979) contain a standard set of identifying data for each decedent. The data are used in searches of the NDI to identify and locate death records filed in the United States. The NDI enables investigators conducting statistical studies to determine if persons in their studies may have died; if so, the Index provides the names of the States where the deaths occurred, the corresponding death certificate numbers, and the dates of death. The NDI user can then make the necessary arrangements with the appropriate State offices to procure copies of death certificates or specific statistical information such as cause of death. ${ }^{34}$

The NDI is designed primarily to facilitate prospective studies in medical and health research by reducing the time, expense, and effort involved in State file searches. In the past, investigators conducting such studies have often found it necessary to contact all or most State vital statistics offices, asking each to search its files to see if a death record had been filed for any individual in the entire study group. Studies of this type are frequently very large, including thousands of subjects, because the risk under investigation may be small on a per individual
basis. Furthermore, State vital statistics offices cannot always promptly undertake large file searches because of staff limitations. The NDI provides a convenient computerized source for such searches.

Deaths included in the NDI file begin with those occurring in 1979. The data base management system in which the data are stored is updated annually. All State data for a given calendar year are received, processed, and added to the national file approximately 12 to 18 months after the end of the calendar year.

Through matching this file annually, the occurrence of deaths among the SOA sample people will be discovered. This information will provide an important update of the data available in the baseline study, enabling analyses of a number of variables from both the SOA and the NDI. For example, cause of death can be related to conditions and other health status information or to hospital stays or doctor visits indicated in the 12 months prior to the 1984 SOA interview.

The followup of the SOA sample through matching with the NDI will be an important aspect of the longitudinal data on the older population.

## Other aspects of the Longitudinal Study of Aging

The initial followup of the LSOA is designed to provide critically needed information on the paths from health through functional disability to institutionalization and death by monitoring changes in living arrangements and functional capacity on a continuing basis. These two factors, living arrangements and functional status, have been identified as the prime risks for institutionalization. If intervention programs are to be designed to reduce institutionalization, the progression from independent living to that status must be studied.

The purpose of the Longitudinal Study of Aging is twofold

- To study changes in functional status and living arrangements with the hope of recognizing potential points for intervention to prevent institutionalization and provide alternative forms of care to extremely elderly people.
- To study length of life and death rates by characteristics of the population that are not reported on death certificates, such as education, whether living alone or with others, frequency of contact with family or friends, and other characteristics for which data were collected on the SOA.

During the initial followup in 1986, LSOA information was collected on current living arrangements and functional status and any changes in living arrangements (including institutionalization) and functional status since the previous interview for those people still living in the community. Death will be verified through matching the NDI.

The design of the LSOA consists of

- 'Advance mailing of letters explaining the study to sample persons ages 70 years and over at the time of the SOA.
- Telephone contact and interviewing in 1986 and in 1988 among those ages 70 years and over who are still living and who have telephone numbers or contact persons.
- Mail contact with a self-administered questionnaire in 1986 and 1988 among those ages 70 years and over who are still living and who do not have telephone numbers or contact persons.
- Matches of all SOA sample persons to the NDI for years 1984 through 1990.
- Matches of all SOA sample persons ages 65 years and over at the time of the SOA interview to medicare files to obtain information about hospital usage and cost data.

The LSOA will provide comprehensive data on the SOA sample, indicating changes over a 6 -year period.

The number of SOA sample persons ages 70 years and over in 1984 and the number and percent selected for the LSOA reinterview are shown in table H .

Table H. Number and percent of persons in the Longitudinal Study of Aging (LSOA) 1986 initial followup reinterview sample, by age and race

| Age and race | SOA ${ }^{1}$ | LSOA | Percent <br> in LSOA |
| :---: | :---: | :---: | :---: |
|  | Number of sample persons |  |  |
| Total | 7,541 | 5,151 | 68.3 |
| Age in 1984 |  |  |  |
| 70-79 years. | 5,446 | 3,061 | 56.3 |
| 80 years and over | 2,095 | 2,090 | 99.8 |
| Race |  |  |  |
| White | 6,891 | 4,535 | 65.8 |
| All other | 650 | 616 | 94.8 |
| Black. | 563 | 560 | 99.5 |
| Other. | 87 | 56 | 64.4 |

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## Appendixes

Contents
I. 1984 National Health Interview Survey Basic Questionnaire ..... 29
II. 1984 Supplement on Aging Questionnaire ..... 51
III. Bradenton, Florida, Supplement on Aging Pretest Questionnaire ..... 70
IV. Supplement on Aging Reinterview Questions ..... 102
V. Definition of selected terms in the 1984 Supplement on Aging ..... 106
VI. Selected information about the design and estimation of the 1984 Supplement on Aging. ..... 108
VII. Examples using SAS ..... 112
Examples of national estimates ..... 112
Examples of national estimates with standard errors ..... 112
VIII. Consultants and staff of the 1984 Supplement on Aging ..... 114
Consultants outside the National Center for Health Statistics ..... 114
National Center for Health Statistics, Work Group on Surveys on the Aging ..... 115
National Center for Health Statistics, Division of Health Interview Statistics, Staff for the 1984 Supplement on Aging ..... 115
U.S. Bureau of the Census, Demographic Surveys Division, Staff for the 1984 Supplement on Aging ..... 116
Tables
I. Annual weights in tape location 219-227 by age: 1984 NHIS Supplement on Aging ..... 108
II. Design effects for selected data on the 1984 NHIS Supplement on Aging ..... 108
III. Number of sample persons in the 1984 NHIS Supplement on Aging, by pseudoprimary sampling unit and age ..... 109

## Appendix I

1984 National Health Interview Survey Basic Questionnaire



| B．LIMITATION OF ACTIVITIES PAGE |  |  |  |
| :---: | :---: | :---: | :---: |
| 81 | Refer to oge． | B1 | $\begin{aligned} & 1\lceil 18-69(1) \\ & 2 \Gamma \text { Other (NP) } \end{aligned}$ |
| 1．What was－－daing MOST OF THE PAST 12 MONTHS；working at a job－or business， keeping house，going to school，or something else？ <br> Priority if 2 or more activities reported：（1）Spent the most time doing：（2）Considers the most important． |  | 1. | 1 Working（2） <br> 2 Г．Keeping house（3） <br> 3 1 Going to school（5） <br> 4 T Something else（5） |
| 2a．Does any impairment ar health problem NOW keep－－from working at a job or business？ |  | 20. | $1 \Gamma^{1}$ Yes（7）「† ${ }^{\text {No }}$ |
| b．Is－－limited in the kind OR amount of work－－can do because of any impairment or health problem？ |  | b． | 2 T．Yes（7）3！${ }^{\text {I }}$ No（6） |
| 3a．Does any impairment or health problem NOW keep－－from doing any housework at all？ |  | 30. | $41^{\prime \prime}$ Yes（4）No |
| b．Is－－limited in the kind OR amount of housework－－can do becouse of any impairment or health problem？ |  | b． | 5 T Y Yes（4）6．No（5） |
| 4a．What（other）condition couses this？ <br> Ask if injury or operation：When did［the（injury）occur？／－－have the operation？］ <br> Ask if operotion over 3 months ago：For what condition did－－hove the operation？ <br> If pregnoncy／delivery or 0－3 months injury or operation－ <br> Reask question 3 where limitation reported，soying：Except for－－（condition），．．．？ <br> OR reask 4b／c． |  |  | （Enter condition in C2，THEN 4D） <br> 1．Old age（Mark＂Old age＂box． THEN 4C） |
| b．Besides（condition）is there any other condition that causes this limitation？ |  | b． | $\begin{aligned} & \text { Г. Yes (Reask } 4 a \text { and } b) \\ & \text { No (4d) } \end{aligned}$ |
| c．Is this limitation coused by any（other）specific condition？ |  | c． | $\begin{aligned} & \text { Yes (Reask } 4 a \text { and b) } \\ & \text { No } \end{aligned}$ |
| Mark box if only one condition． <br> d．Which of these conditions would you say is the MAIN cause of this limitation？ |  | d． | 「 Only 1 condition <br> Main cause |
| 5a．Does any impairment or health problem keep－－from working at a job or business？ |  | So． | $1 \square$ Yes（7） |
| b．Is－－limited in the kind OR amount of work－－could do becouse of any impoirment or health problem？ |  | b． | $2 \square \mathrm{Yes}$（7） 3 ［ ；No |
| 82 | Refer to questions $3 a$ and 36. | B2 | 1 T． res＂in 3 a or 36 （NP） <br> $2 \square$ Other（6） |
| 6a．Is－－limited in ANY WAY in any activities because of an impairment or health problem？ |  | 60. | 1 T Yes $2 \Gamma^{-N o(N P)}$ |
| b．In what way is－－limited？Record limitotion，not condition． |  | b． | Limitation |
| 70．What（other）condition causes this？ <br> Ask if injury or operation：When did［the（injury）occur？／－－have the operation？］ <br> Ask if operotion over 3 months ago：For what condition did－－have the operation？ <br> If pregnoncy／delivery or 0－3 months injury or operation－ <br> Reask question 2，5，or 6 where limitation reported，saying：Except for－－（condition），．．．？ <br> OR reask 7b／c． |  |  | （Enter condition in C2，THEN 7b） <br>  THEN 7C） |
| b．Besides（condition）is there any other condition that causes this limitation？ |  | b． | ｜YYes（Reask 7a and D） <br> 「№（7d） |
| c．Is this limitation caused by any（other）specific condition？ |  | c． | T．Yes（Reask $7 a$ and b） <br> No |
| Mark box if only one condition． <br> d．Which of these conditions would you say is the MAIN cause of this limitation？ |  | d． | 「Only I condition <br> Main cause |


| B. LImitation of activities Page, Continued |  |  |  |
| :---: | :---: | :---: | :---: |
| B3 | Refer to oge. | B3 |  |
| 8. What was -- doing MOST OF THE PAST 12 MONTHS; working at a job or business, keeping house, going to school, or something else? <br> Priority if 2 or more octivities reported: (1) Spent the most time doing: (2) Considers the most important. |  | 8. | Working <br> 2 Kouse <br> 2 Keping house <br> Soing so school <br> Something else |
| 90. Because of any impairment or health problem, does -- need the help of other persons with -- personal core needs, such os eoting, bothing, dres sing, or getting around this home? <br> b. Because of any impairment or health problem, does -- need the help of other persons in handling -- routine needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes? |  | 9. | 1.-Yes (13) [ino |
|  |  | b. |  |
| 10a. Is -- able to take part AT ALL in the usual kinds of play activities done by most children -- age? <br> b. is - limited in the kind OR amount of ploy activities -- con do becouse of any impairment or heolth problem? |  | 10. | Yes $\quad 0{ }^{-1} \mathrm{No}$ (13) |
|  |  | b. | 11-\%es(13) |
| 11a. Does any impairment or health problem NOW keep -- from artending school? <br> b. Does-こattend a special school or special classes becouse of any impairment or health problem? <br> c. Does -- need to attend a special school or special classes because of any impairment or health problem? <br> d. is =- limited in school attendance because of health? |  | 110. | 1! Ires (13) [!No |
|  |  | b. |  |
|  |  | c. | 3[TYes (13) []No |
|  |  | 万. | 4 [jues (13) ${ }^{\text {a }}$ |
| 120. Is -- limited in ANY WAY in any activities because of an impaiment or health problem? <br> b. ITn what way is =- limited? Record limitotion, not condition. |  | 120. | 1[]Yes 2[iNo (NP) |
|  |  |  |  |
|  |  |  | Limitation |
| 130. What (other) condition causes this? <br> Ask if injury or operation: When did [the (injury) occur?/--have the operation'] <br> Ask if operation over 3 months ago: For what condition did -- have the operation? <br> If pregnancy/delivery or 0-3 months injury or operation - <br> Reosk question where limitation reported, saying: Except for -- (condition), . . .? <br> OR reosk 13b/c. <br> b. Besides (condition) is there any other condition that couses this limitation? <br> c. Is this limitation coused by ony (other) specific condition? <br> Mork box if only one condition. <br> d. Which of these conditions would you say is the MAIN cause of this limitation? |  | 130. | (Enter condition in C2, THEN ${ }^{13 b}$ ) <br> 1!." Old age (Mark"Old age" box, THEN (30) |
|  |  | b. | $\begin{aligned} & \text { Y Yes (Reask 13a and b) } \\ & \text { No (13d) } \end{aligned}$ |
|  |  | c. | Y̌es (Reask $\overline{\text { 13a }}$ 5 No |
|  |  | d. | Tjonly 1 condition |
|  |  |  | Main cause |
| Footnotes |  |  |  |


| B. Limitation of activities Page, Continued |  |  |  |
| :---: | :---: | :---: | :---: |
| B4 | Refer to oge. | B4 |  |
| B5 | Kefer to "O1d age." and "LA" boxes. Mark first oporopiate box. | B5 | $\begin{aligned} & \text { ="O1d ase". box maked (14) } \\ & \equiv \text { Eniry in "LA" box (14) } \\ & \text { OOme' (NP) } \end{aligned}$ |
| 140. Becouse of any impeirment or hoalth probliom, does -- noed the holp of other porsons with -- personal core noods, such as ooting, bothing, drossing, or getting eoound this home? <br> if under 18, skip to nexi person, otherwise osk: <br> b. Becouse of ony impairment or hoolth problem, does -- noed the help of ather persons in handing -- routine meods, such as averyday household chores, deing mecessery business, shopping, or gotting around for other purposes? |  | $\begin{array}{r}14 . \\ \hdashline \\ \hline 6 .\end{array}$ |  |
| 150. Whot (other) condition causes this? <br> Ask if injury or operation: When did [the (iniury) occur?/ -- hove the aperation?] Ask if operation over 3 months ogo: For whot condition did -- hove the operetion? If pregnoncy/delivery or 0-3 months injury or operation - <br> Reask question 14 where limitation reporred, saying: Excopt for -- (condition). . . .? OR reask $15 b^{\prime} c$. <br> b. Besides (condition) is there any ather condition that couses this limitotion? |  | ${ }^{150}$ | (Enter condtion in C2, TMEN 13b) <br> ' $\square$ Old age (Mark "OId age" box, THEN 15c) |
|  |  | ${ }^{6}$ |  |
| c. Is this limitation caused by eny (other) specific condition? $\qquad$ <br> Mark box if only one condition. <br> d. Which of these conditions would you say is the MAIN couse of this limitation? |  | c. | Yes (Reask 15e and b) |
|  |  | d. | Only 1 cendition $\qquad$ <br> Man couse |
| FOOTNOTES |  |  |  |



Hand calendor.
\{The next questions refer to the 2 weeks outlined in red on that calendar, beginning Monday, (date) and ending this past Sunday (date).'

On how many of the (number in $2 b$ or $3 b$ ) doys missed from [work/school] did -- stay in bed more than half of the day use of illness or injury
$00 \quad$ None
No. of days

1a. DURING THOSE 2 WEEKS, did -- work at any time at a job or business not counting work around the house? (Include unpoid work in the family

> I[ Yes (Mork "Wa' box, THEN 2)

2 No
Even though -- did not work during those 2 weeks, did --

- job or business?

During thase 2 weeks, did -- miss any time from a job

Duing that 2-week period, how many days did -- miss mor
than half of the day from -- job or business because of ilness or injury?

During those 2 weeks, did -- miss any time from school because or iniury?

00 , No (4)
During that 2.week period, how many days did -- miss more han half of the day from school becouse of illness or injury?
'1984) (8.9.83)

| E. 2-WEEK DOCTOR VISITS PROBE PAGE |  |  |  |
| :---: | :---: | :---: | :---: |
| Read to respondent(s): <br> These next questions are about health care received during the 2 weeks outlined in red on that calendar. |  |  |  |
| E1 | Refer to age. | E1 | $\square$ Under $14(10)$ $\Gamma: 14$ and over (1a) |
| 10. During those 2 weeks, how many times did -- see or talk to a medical doctor? \{Include all types oi doctors, such as dermatologists, psychiatrists, and ophthalmologists, as well as general practitioners and asteopaths.\} (Do not count times while an overnight patient in a hospital.) <br> b. During those 2 weeks, how many times did anyone see or talk to a medical doctor about --? (Do not count times while an overnight patient in a hospital.) |  | $\begin{gathered} \begin{array}{c} 10 . \\ \text { ond } \\ \text { b. } \end{array} \end{gathered}$ |  |
| 20. (Besides the time(s) you just told me obout) During those 2 weeks, did anyone in the family receive health care at home or go to a doctor's office, clinic, hospital or some other place? Include care from a nurse or anyone working with or for a medical dactor. Do not count times while an overnight patient in a hospital. Yes |  |  |  |
| b. Who received this care? Mark "DR Visit" box in person's column. |  | 2b. | -'or visit |
| c. Anyone else? |  |  |  |
| Ask for each person with $-\bar{D}$ visit in 2 D : <br> d. How many times did -- receive this care during that period? |  | d. |  |
| 3a. (Besides the time(s) you already told me about) During those 2 weeks, did anyone in the family get any medical advice, prescriptions or test results over the PHONE from a doctor, nurse, or anyone working with or for a medical doctor?$\qquad$ |  |  |  |
| b. Who was the phone call about? Mark "Phone call" box in person's column. |  | 36. | - phone call |
| c. Were there any calls obout anyone else? |  |  |  |
| Ask for each person with "Phone call" in 3b: <br> d. How many telephone calls were made about --? |  | d. |  |
| E2 | Add numbers in 1. 2d, and 3d for each person. Record total number of visits and calls in "2-wk. OV' box in item Cl . |  |  |
| FOOTNOTES |  |  |  |


| F. 2.WEEK DOCTOR VISITS PAGE | DR VISIT 1 |  |
| :---: | :---: | :---: |
| Refer to Cl, '2-WK. DV'" box. |  | ON NUMBER |
| Refer to oge. | F1 | E Under 14 (10) |
| b. On what (other) date(s) during those 2 weeks did anyone see or talk to a medical doctor, nurse, or doctor's assistant about -- ? | (10. |  |
| Ask ofter last DR visit column for this person: <br> c. Were there any other visits or calls for --during that period? Make necessary correction to 2-WK. OV box in CI. | c. | $1[$ Yes (Reask la or b and c) 2 jno (Ask 2-5 for each visit) |
| 2. Where did -- receive health care on (date in 1). at a doctor's office, clinic, hospital, some other place, or was this a telophone call? <br> If doctor's office: Was this office in a hospital? <br> If hospital: Was it the outpatient clinic or the emergeney room? <br> If clinic: Was it a hospital outpatient clinic, a company clinic, a public health clinic, or some other kind of clinic? <br> If lab: Was this lab in a hospital? <br> What was done during this visit? (Footnote) | 2. |  |
| Ask 3b if under 14. <br> 3a. Did $==$ octuolly tolk to a medical doctor? <br> b. Did anyone actually tolk to a medical doctor about-:? <br> c. What type of medical person or assistont was talked to? <br> d. Does the (entry in 3c) work with or for ONE doctor or MORE than one doctor? <br> e. $\bar{F}$ or this [yisit/call] what kind of doctor was the (entry in 3 c) working with or for -a general practitioner or a specialist? <br> f. Is that doctor a general proctitioneror a specialist? <br> g. What kind of specialist? |  | 1-Yes (3t) |
|  |  |  |
|  | d. | $\begin{array}{ll} 1 & { }^{1} \text { One (31) } \\ 2 & \text { None (4) } \\ 2 & \text { More } \end{array}$ |
|  | - 0 ad | $1!: G P(4) \quad 2$ [: Specialist (3g) $\quad$ [ $[$ [ DK (4) |
|  | 1. |  |
|  | 9. |  |
| Ask $4 b$ if under 14. <br> 40. For what condition did -- see or talk to the [doctor/(entry in 3c)] on (date in 1)? Mark first appropriate box. <br> b. For what condition did anyone see or ralk to the [doctor/(entry in 3c)] about -- on (date in 1)? Mark first appropriate box. <br> c. Was a condition found os result of the [ost(s)/examination]? <br> d. Wos this [test/exomination] because of o specific condition.- had? <br> e. During the pasti2 weeks wos =- sick because of $=$ pregnoncy? <br> f. What was the matter? <br> 9. During this Evisifcall] was the doctor/(entry in 3c] talked to about any (other) condition? <br> h. What was the condition? |  | ```1 [! Condition (Item C2, THEN 4g) 2 Pregnancy (4e) \({ }^{3}\)-i Test(s) or examination (4C) - Other (Specily)``` |
|  |  |  |
|  | d. | Yes (4h) |
|  |  |  |
|  | f. | Condition ( 1 |
|  | h. ${ }^{\text {9.- }}$ | Pregn |
|  |  | Condition THEN 49) |
| Mork box if "Telephone" in 2. <br> 5a. Did - have any kind of surgery or operation during this visit, including bene settings and stitches? <br> b. What was the name of the surgery or operation? If name of operation not known, describe what was done. <br> c. Was there any other surgery or operation during this visit? | 5 s. | 0 Telephone in 2 (Next OR visit) Yes 2 No (Next DR visit) |
|  |  |  |
|  | c. | Yes (Reask 50 and c) No |

FORM HIS.1 11984-A.Y R

\begin{tabular}{|c|c|c|}
\hline G. HEALTH INDICATOR PAGE \& \& \\
\hline \begin{tabular}{l}
1a. During the 2 -week period outlined in red on that calendar, has anyone in the family had an injury from an accident or other cause that you have not yet told me about?
\(\qquad\) Yes \\
\(1:\) No (2) \\
b. Who was this? Mark "Injury" box in person's column. \\
c. What was -- injury? \\
Enter injury (ies) in Derson's column. \\
d. Did anyone have any other injuries during that period? \\
: Yes (Reask 1b, c, and d) \\
I: : No \\
Ask for each injury in Ic: \\
e. As a result of the (injury in \(1 c\) ) did [--/anyone] see or talk to a medical doctor or assistant (about --) or did - - cut down on -- usual activities for more than half of a day?
\end{tabular} \& 16.
\(\cdots\)
c.
c.
\(\cdots\)

$\ldots$

e. \& | C:'injury |
| :--- |
| Injury |
| - - Yes (Enter injury in C2, THEN 1e tor next infury) |
| : INo (1e tor next infury) | <br>

\hline 2. During the past 12 months, fthat is, since (12-month date) a year ago\} ABOUT how many days did illness or injury keep -- in bed more than half of the day? (Include days while an overnight patient in a hospital.) \& 2. \& 000 [ None
$\qquad$ No. of days <br>

\hline | 3a. During the past 12 months, ABOUT how many times did [--/anyone] see or talk to a medical doctor or assistant (about --)? (Do not count doctors seen while an overnight patient in a hospital.) (Include the (number in 2-WK DV box) visit(s) yau already told me about.) |
| :--- |
| b. About how long has it been since [--/anyone] last saw or talked to a medical doctor or assistant (about --)? Include dactors seen while a patient in a hospital. | \& | 3a. |
| :--- |
| b. | \& |  |
| :--- |
| 1 Interview week (Reask 3b) |
| 2 [-L Less than 1 yr. (Reask 3a) |
| ${ }^{3}$ [:'1 1 yr.. less than 2 yrs. |
| $4 L^{2} 2$ yrs., less than 5 yrs. |
| 5 [;) 5 yrs. or more |
| 0 Never | <br>


\hline 4. Would you say -- health in general is excellent, very good, good, fair, or poor? \& 4. \& | 1 | Excellent | A |
| :--- | :--- | :--- |
| 2 | Fair |  |
| 2 | Very good | 5 |
| 3 | Good |  | <br>


\hline | Mark box if under 18. |
| :--- |
| 50. About how tall is -- without shoes? |
| b. About how much does -- weigh without shoes? | \& | 5a. |
| :--- |
| b. | \& :- Under 18 (NP)

$\qquad$ Feet $\qquad$ Inches
$\qquad$ Pounds <br>
\hline FOOTNOTES \& \& <br>
\hline
\end{tabular}





| J. HOSPITAL PAGE |  |  | \|hospital stay 1 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Refer to CI, "HOSP." box. |  |  | 1. | PERSON NUMBER_______ |  |  |
| 2. You soid earlier that - was a pationt in the hospital since ( 13 -month hospital date) a year age. On what date did -- enter the hospital ([the last timedthe time before that])? Record each entry date in a separate Hospital Stay column. |  |  | 2. | Month | Date | Year <br> 19 $\qquad$ |
| 3. How many nights was -- in the hospitol? |  |  | 3. | 0000 | $\overline{\operatorname{ext}(H S)}$ |  |
| 4. For what condition did - - enter the hospital? <br> - For delivery ask: - For newborn ask: <br> Was this a normal delivery? <br> Was the baby normal at birth? <br> - For initial "No condition" ask: <br> Why did -- enter the hospital? <br> If '"No." ask: <br> If "No." ask: <br> What was the matter? <br> What was the matter? <br> - For tests, ask: What were the results of the tests? <br> If no results, ask: <br> Why were the tests performed? |  |  | 4. |  | $\left.\begin{array}{l} \text { livery }  \tag{5}\\ \text { birth } \end{array}\right\}$ |  |
| $J 1$ | Refer to questions 2, 3, and 2-week reference period. |  | J |  | one night in 2 period (Enter EN 5) <br> in 2-week re | ition <br> se period (5) |
| 5e. Did - heve any kind of surgery of operation during this stay in the hospital, including bone settings and stitches? |  |  | So. |  |  | $2 \square$ No (6) |
| b. What was the name of the surgery or operation? <br> If name of operation not known, describe what was done. |  |  | b. |  |  |  |
| c. Was there any other surgery or operation during this stay? |  |  | c. |  | sk 5b and c) | $\square \mathrm{N}$ |
| 6. What is the name and address of this hospital? |  |  | 6. | Name |  |  |
|  |  |  | Number and street |
|  |  |  | City or |  | State |
| FOOTNOTES |  |  |  |  |  |  |



Reter to RD and C2.
' "Yes" in "RD" box AND more than I condition in C2 (6) Other (K2)

6a. During the 2 weeks outlined in red on that calendar, did cause -- to cut down on the things -- usually does? Ci Yes
[: No (K2)
b. During that period, how many days did-a cut down for more than half of the day?

00 ? None (K2)
Days
7. During those 2 weeks, how many days did -- stay in bed for more than
half of the day because of this condition?
$00[$ None
__ Days
Ask if "Wa/Wb" box marked in Cl :
8. During those 2 weeks, how many days did -- miss more than half of the day from -- job or business because of this condition?

00 Li None —__Days
Ask if age 5-17:
9. During those 2 weeks, how many days did -- miss more than half of the day from school because of this condition?
$00[$ None_ Days
K2
Condition has "CL LTR" in C2 as source (10) ; Condition does not have "CL LTR" in C2 as source (K4)
10. About how many days since (12-month date) a year ago, has this condition kept -- in bed more than half of the day? (Include days while an overnight patient in a hospital.)
000 [.].] None $^{-3}$ $\qquad$
11. Was -- ever hospitalized for -- (condition in 3) ?
1 [i:Yes 2 No

K3
Missing extremity or organ (K4)
Other (12)
120. Does -- still hove this condition?

1[JYes (K4)
「. ${ }^{\text {ino }}$
b. I's this condition completely cured or is it under control? 2 [- Cured - L Other (Specify)

3 Under control (K4)

$$
i f y)^{\prime}
$$

$$
-
$$

6. About how long did have this condition before was cured?
[ Less than 1 month
OR $\qquad$

d. Was this condition present at any time during the past $\overline{12}$ months? 1[, Yes

$$
2 \text { L! No }
$$

1- First accident/injury for this person (14) 8 [-: Other (13)
13. Is this (condition in 3p) the result of the some accident you already old me about?

$$
\begin{aligned}
& \text { Yes (Record condition page number where } \\
& \text { accident questions tirst completed.) }
\end{aligned}
$$

$$
\overline{\mathrm{E}} \mathrm{No}
$$

Were did the accident happen?
I $\because$. At home (inside house)

- At home (adjacent premises)

Street and highway (includes roadway and public sidewalk)
4 Farm
Industrial place (includes premises)
School (includes premises)

- Place of recreation and sports, except at school

L-: Other (Specity)

Mark box if under $18 . \quad$ Under 18 (16)
5a. Was -- under 18 when the accident happened?
Yes (16) İjo
b. Was -- in the Armed Farces when the aceident happened? 2 L!Yes (16) I- No
c. Was -- at work at -- job or business when the accident happened? 3 [Yes 4 No

## $16 a$.

 in ony way?$1!$ Yes
or other motor vehicle involved in the accident
2 [..:No(17)
b. Was more than one vehicle involved?

1 Y: Yes 2 jNo
c. Was [it/either one] moving at the time?

$$
1 \text { Yes } 2 \text { No }
$$

17a. At the time of the accident what part of the body was hurt? What kind of injury was it?
Anything else?









## Appendix II 1984 Supplement on Aging Questionnaire

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\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{Section P. OCCUPATION AND RETIREMENT, Continued} <br>
\hline $P 3$ \& Refer to Wa/Wb boxes for SP in C1 on the HIS-1 Household Composition Page \& Wa or Wb box marked (Section Q)

Other (P4) \& 89 <br>

\hline P4 \& Mark first appropriate box \& $$
\begin{aligned}
& \left.\begin{array}{l}
\square \mathrm{SP} \text { is } 75+ \\
2 \\
{ }_{2} \square \\
{ }_{3} \quad \\
\text { Proxy }
\end{array}\right\} \text { (Self response (13) }
\end{aligned}
$$ \& 90 <br>

\hline \multicolumn{2}{|l|}{13a. Do you think there are some kinds of work you could do now if jobs were available?} \& \begin{tabular}{l}
Yes

$\square$ $\left.\begin{array}{l}\text { No } \\ \text { DK/maybe }\end{array}\right\}$ <br>
(Section Q)
\end{tabular} \& 91 <br>

\hline \multicolumn{2}{|l|}{b. Do you WANT to work at a job or business?} \& $\square$ Yes
No \& 92 <br>
\hline \multicolumn{4}{|l|}{FOOTNOTES} <br>
\hline
\end{tabular}












RT 73


## Appendix III

Bradenton, Florida, Supplement on Aging Pretest Questionnaire




\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|l|}{Section M. FAMILY STRUCTURE, RELATIONSHIPS, SUPPORT AND LIVING ARRANGEMENTS, Continued} <br>
\hline \multirow[t]{2}{*}{Note - Ask 8 immediately after receiving a "yes" in 7 . Repeat question
resuming the list. resuming the list.} \& \multicolumn{2}{|l|}{Read to respondent - I'm going to read a list of things that people sometimes get help with.} <br>
\hline \& 7. Do you usually recelve - \& 8. Who usualy gives this help, a (spouse), relative, friend, neighbor or some other person? Anyone else? <br>

\hline a. Help with fixing things around the house, such as home repairs or yard work? \&  \& \begin{tabular}{l}

<br>
Spouse <br>
Relative (Specify) $\qquad$

$4 \square$ Other (S $\qquad$
\end{tabular} <br>

\hline b. Help with housekeeping or housework, such as mending. sowing, or laundry? \& $\left.\begin{array}{l}\text { 1 Yes } \\ 2 \square \mathrm{No} \\ \text { 3 Doesn't apply }\end{array}\right\}$ (Next activity) $\quad \square$ \& | Spouse Relative (Specify) $\qquad$ |
| :--- |
| Friend/neighbor Other (Specify) $\qquad$ | <br>


\hline c. Help with cooking or preparing your meals? \& $\left.\begin{array}{l}\square \text { Yes } \\ 2 \square \text { No } \\ 3 \square \text { Doesn't apply }\end{array}\right\}$ (Next activity) \& | Spouse Relative (Specify) $\qquad$ |
| :--- |
| Friend/nei |
| 4 Other (Specify) $\qquad$ | <br>


\hline d. Help when you are ill? \&  \& | Spouse (Specify) |
| :--- |
| Friend/ne $\qquad$ |
| 3 |
| 4 Other (Specify) $\qquad$ | <br>


\hline -. Help taking your medication? \&  \& | Spouse Relative (Specify) $\qquad$ Friend/neighbor |
| :--- |
| ${ }_{4} \square$ Other (Specify) $\qquad$ | <br>


\hline f. Help with your personal care, such as washing hair or clipping toe nalis? \& $\left.\begin{array}{l}\square \text { Yes } \\ 2 \square \text { No } \\ 3 \square \text { Doesn't apply }\end{array}\right\}$ (Next activity) \& | Spouse Relative (Specify) $\qquad$ |
| :--- |
| ${ }_{3}$ Friend/neighbor |
| $4 \square$ Other (Specify) $\qquad$ | <br>

\hline g. REGULAR financial assistance or financial contributions? \&  \& $\qquad$ <br>

\hline h. Money Gifts? \&  \& | Spouse Relative (Specify) $\qquad$ |
| :--- |
| Friend/neighbor Other (Specify) $\qquad$ | <br>

\hline 1. Other gifts, such as clothing or food? \&  \& \begin{tabular}{l}
Spouse

<br>
Relative (Specify) $\qquad$
Friend/neighbor
Other (Specify) $\qquad$
\end{tabular} <br>

\hline J. Regular vacations, excursions or holiday trips provided by someone else? \&  \& | Spouse elative (Specify) $\qquad$ |
| :--- |
| Friend/neighbor Other (Specify) | <br>

\hline k. Transportation, that is, does anyone regulariy drive you to the doctor, grocery, or send ataxi? \& $$
\left.\begin{array}{l}
1 \square \text { Yes } \\
2 \square \text { No } \\
{ }_{3} \square \text { Doesn't apply }
\end{array}\right\} \text { (Next activity) }
$$ \& Spouse

Relative (Specify) $\qquad$
Friend/neighbor
Other (Specify) $\qquad$ <br>
\hline 1. Help with managing money? \&  \& Spouse
Relative (Specify) $\qquad$
Friend/neighbor
Other (Specify) $\qquad$ <br>
\hline m. Help in any other way? \& $\qquad$ \&  <br>
\hline
\end{tabular}



Section M. FAMILY STRUCTURE, RELATIONSHIPS, SUPPORT AND LIVING ARRANGEMENTS, Continued


FOOTNOTES

| Section N．COMMUNITY AND SOCIAL SUPPORT |  |  |  |
| :---: | :---: | :---: | :---: |
| Note－Ask 2－5 immediately after receiving a＂Yes＂ in 1．Then resume reading list． | Read to respondent－The next questions are about community services for older people． |  |  |
|  | 1．Which of the following services are avallable in this area？ <br> When resuming list－ <br> Is（service）available in this area？ | 2．Have you ever used it？ | 3．When did you last use（service）？ |
| a．A senior centor？ | Yes | 1－Yes <br> ${ }_{2} \square \mathrm{No}(5)$ <br> ${ }_{3} \square \mathrm{DK}$（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| b．Transportation for the elderly？ |  | 1－Yes <br> ${ }_{2} \square$ No（5） <br> ${ }^{3} \square \mathrm{DK}$（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} \left.1 \square \begin{array}{l} \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \\ 3 \\ 4 \text { Months ago } \\ 4 \end{array}\right) \text { Years ago (5) } \end{array}\right.$ |
| c．Meals on wheels or meals brought into the home？ |  | 1 DYes <br> ${ }_{2}$ 口No（5） <br> ${ }_{3} \square \mathrm{DK}$（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| d．Group meals or meals outside the home？ |  | 1－Yes <br> $2 \square$ No（5） <br> ${ }^{3}$ DDK（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \text { D Days ago } \\ 2 \square \text { Weks } \\ 3 \square \text { Montho ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| －．Advice about nutrition？ | ${ }^{1} \mathrm{DY} \mathrm{Yes}$ <br> $\left.\begin{array}{l}\text { 2口No } \\ 3 \square \mathrm{DK}\end{array}\right\}$（Next service） | 1 पyes <br> ${ }_{2}$ 口No（5） <br> $3 \square$ DK（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ \square \text { Years ago (5) } \end{array}\right.$ |
| f．Homemaker service to holp with household chores like cleaning， shopping，and cooking？ |  | 1 －Yes <br> $2 \square$ No（5） <br> ${ }_{3} \square \mathrm{DK}$（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \begin{array}{l} \text { Dars ago } \\ 2 \square \text { Weks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array} \end{array}\right.$ |
| g．Routine tolephone call service to check on your health or well－belng？ |  | 1－Yes <br> 2 No（5） <br> 3ПDK（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| h．Visiting nurse sarvice？ |  | 1－Yes <br> 2 पNo（5） <br> 3 DK（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| I．A health alde who comes into the home？ |  | 1 Yes <br> 2 पNo（5） <br> ${ }_{3} \square$ DK（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| J．Adult day care or day care for the elderly？ | Yes <br> $\left.\begin{array}{l}2 \square \mathrm{NO} \\ 3 \square \mathrm{DK}\end{array}\right\}$（Next service） | 1－Yes <br> ${ }_{2} \square$ No（5） <br> ${ }_{3}$ पDK（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| k．Geriatric Day Rehabilitation Center， that is，a place for physical therapy？ |  | ，口yes <br> 2 №（5） <br> ${ }_{3}$ DDK（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago (5) } \end{array}\right.$ |
| I．Legal sorvices for the olderly？ |  | 1 पYes <br> 2 पNo（5） <br> ${ }_{3} \square \mathrm{DK}$（Next service） | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \square \begin{array}{l} \text { Days ago } \\ 2 \square \text { Weeks ago } \\ 3 \square \\ 4 \\ 4 \\ 4 \end{array} \text { Yonths ago ago (5) } \end{array}\right.$ |
| m．A hospice for the terminally III or an in－home hosplece service？ |  | $\begin{aligned} & 1 \text { 口Yes } \\ & 2 \text { 口No (5) } \\ & 3 \text { 口DK (6) } \end{aligned}$ | $\overline{\text { Number }}\left\{\begin{array}{l} 1 \text { DDays ago } \\ 2 \square \text { Weekk ago } \\ 3 \square \text { Months ago } \\ 4 \square \text { Years ago } \end{array}\right\}(5)$ |





\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{5}{|c|}{Section O. OCCUPATION AND RETIREMENT, Continued} \\
\hline NOTE - Ask 4a-j before asking 5-8 \& \multicolumn{4}{|l|}{NOTE - Ask 5-8, as appropriate, for each "Yes" in 4a-j} \\
\hline 4. During the past 12 months, did you receive any payments or benefits from - \& 5. How long have you been recolving (source in 4)? \& 6. Did you receive it because you qualified for the payment, or because you are a dependent or survivor of someone olso? \& 7. Is the (source in 4) received because of a disability YOU may have? \& 8. What was the main condition or health problem for which you received benefits or payments from (source in 4)? \\
\hline \begin{tabular}{l}
a. A private union or \(\square\) employer pension? \\
\(\square\)
Yes
No
\end{tabular} \& \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] \& Own

Someone else (Next source)

Both \& $\square$ Yes

No (Next source) \& - <br>

\hline | b. A\{Federal, state, or |  |
| :--- | :--- |
| localgovernment <br> omployev pensiont | $\square$ |
|  | 2 Yes |
|  | $\square$ No |
|  |  |
|  |  | \& \[

\overline{Number}\left\{$$
\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}
$$\right.
\] \& Own

Someone else (Next source)
Both \& ```
1\squareY
Yos
2\square No (Next source)

``` & \(\square\) \\
\hline \begin{tabular}{|l|l|}
\hline c. Millitary Retirement? & \(\square\) \\
& \(1 \square\) Yes \\
& \(2 \square\) No \\
& \\
& \\
\hline
\end{tabular} & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & \(\square\) Own

Someone else (Next source)
Both & \begin{tabular}{l}
\(\square\) Yes \\
\(2 \square\) \(\square\) No (Next source)
\end{tabular} & \\
\hline \begin{tabular}{|l|l|}
\hline d. Railroad Retirement? & \(\square\) \\
& \(1 \square\) Yos \\
& \(2 \square\) No \\
& \\
& \\
\hline
\end{tabular} & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & \(\square\) Own

Someone else (Next source)
Both & \(\square\) Yes
No (Next source) & \\
\hline \begin{tabular}{|l|l|l|}
\hline e. Social Security? & \(\square\) \\
& \(1 \square\) Yes \\
& \(2 \square\) No \\
& & \\
& &
\end{tabular} & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & 1 \(\square\) Own
\(\square\) Someone else (Next source)
Both & \(\square\) Yes
\(\square\) No (Next source) & \\
\hline f. Workman's compensation? & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & \begin{tabular}{l}
Own (8) \\
2
Someone else
(Next source) Both (8)
\end{tabular} & & \\
\hline \begin{tabular}{|l|l|}
\hline g. Supplemental Security & \(\square\) \\
\begin{tabular}{c} 
Income, known as SSI \\
from Federal, state, or \\
local government \(\}\) ?
\end{tabular} & \(1 口\) Yes \\
& \(2 \square\) No \\
& \\
& \\
& \\
&
\end{tabular} & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \\
2 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \\
4
\end{array} \square \text { Months } \quad\right. \text { Years }
\] & \begin{tabular}{l}
Own \\
2 Someone else (Next source)
Both
\end{tabular} & \begin{tabular}{l}
\(\square\) Yes \\
2 \(\square\) \\
\(\square\) No (Next source)
\end{tabular} &  \\
\hline \begin{tabular}{|l|l|}
\hline h. The Veterans & \(\square\) \\
Administration? & \(1 \square\) Yes \\
Use when asking 5 and 7: & \(2 \square\) No \\
Payment or benefit & \\
from the VA? & \\
\hline
\end{tabular} & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & \begin{tabular}{l}
Own

Someone else (Next source) \\
3 [ Both
\end{tabular} & \begin{tabular}{l}
\(\square\) Yes \\
2 \(\square\) No (Next source)
\end{tabular} & \\
\hline i. State public welfare or assistance? & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & \begin{tabular}{l}
Own
Someone else (Next source) \\
\(3 \square\)
Both
\end{tabular} & \(\square\) Yes
No (Next source) &  \\
\hline  & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & Own (8)
Someone else (Next page)
Both (8) & & - \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{5}{|c|}{Section O. OCCUPATION AND RETIREMENT, Continued} \\
\hline \multicolumn{5}{|l|}{\begin{tabular}{l}
Read to respondent - The next questions deal with your ability to do certain things that some people have difficulty with when they work at a job or business, or do chores around the house. \\
Hand card SO9 \\
Please tell mo how much difficulty, If any, you have doing EACH activity, by yourself, and not using any aids.
\end{tabular}} \\
\hline 9. Do you have no difficulty, some difficulty, much difficulty or are you unable at all to - & \begin{tabular}{l}
(1) \\
Walk for a quarter of a mile, (which is about 2 or 3 city blocke, without resting?
No difficulty
Some
Much
Unable
\end{tabular} & \begin{tabular}{l}
(2) \\
Walk up and down one flight of stairs without resting?
No difficulty
Some
Much \\
4 Unable
\end{tabular} & \begin{tabular}{l}
\multicolumn{1}{c}{ (3) } \\
\begin{tabular}{l} 
Stand for long \\
periods, about 2 \\
hours)?
\end{tabular} \\
\\
\\
\(1 \square\) No difficulty \\
\(2 \square\) Some \\
\(3 \square\) Much \\
\(4 \square\) Unable
\end{tabular} & \begin{tabular}{l}
(4) Sit for long periods, \{about 2 hours\}?
No difficulty
Some
Much \\
4 Unable
\end{tabular} \\
\hline \begin{tabular}{l}
Ask 10a-e for each activity marked "much" or "unable" in 9. \\
10a. For how long have you thad much difficulty /been unable to] (activity)?
\end{tabular} & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \\
1 \\
2 \text { Days } \\
3 \\
3
\end{array} \text { Weeks } \begin{array}{l}
\text { Months } \\
4 \\
4
\end{array}\right.
\] & \[
\overline{\text { Number }}\left\{\begin{array}{ll}
1 & \square \text { Days } \\
2 \\
3 & \text { Weeks } \\
3 & \text { Months } \\
4
\end{array} \square\right. \text { Years }
\] & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \square \text { Days } \\
2 \square \text { Weeks } \\
3 \square \text { Months } \\
4 \square \text { Years }
\end{array}\right.
\] & \[
\overline{\text { Number }}\left\{\begin{array}{l}
1 \\
1 \\
2
\end{array} \text { Davs } \begin{array}{l}
\text { Weeks } \\
3 \\
3 \\
4
\end{array} \text { Months } \begin{array}{l}
\text { Years }
\end{array}\right.
\] \\
\hline \multirow[t]{5}{*}{\begin{tabular}{l}
b. What (other) condition causes you to [have much difficulty/be unable to] (activity)? \\
Ask if injury or operation: When did the (iniury) occur?/you have the operation]? Enter injury if over 3 months ago. \\
Ask or reask 10c, if 0-3 months injury or operation. \\
Ask if operation over 3 months ago: For what condition did you have the operation? Enter condition.
\end{tabular}} & \[
\begin{aligned}
& \text { 1. Old age (10d) } \\
& 1 . \\
& \hline
\end{aligned}
\] & \[
\begin{aligned}
& \text { 1 Old age (10d) } \\
& 1 .
\end{aligned}
\] & 1. & \begin{tabular}{l}
Old age (10d) \\
1.
\end{tabular} \\
\hline & 2. & 2. & 2. & 2. \\
\hline & 3. & 3. & 3. & 3. \\
\hline & 4. & 4. & 4. & 4. \\
\hline & 5. & 5. & 5. & 5. \\
\hline c. Besides (condition) is there any other condition which causes this? &  & \[
\begin{aligned}
& 1 \square \text { Yes (Reask } 10 \mathrm{~b} \\
& \text { and c) } \\
& 2 \square \text { No (10e) }
\end{aligned}
\] &  & \[
\begin{aligned}
& 1 \square \text { Yes (Reask } \begin{array}{l}
\text { and c) } \\
20 \mathrm{Nob} \\
2 \mathrm{No}
\end{array} \\
& \text { (10e) }
\end{aligned}
\] \\
\hline d. Is this caused by any (other) specific condition? & \[
\begin{aligned}
& 1 \square \text { Yes (Reask }{ }_{\text {and }} \text { 10b } \\
& 2 \square \mathrm{No}^{\text {an }}
\end{aligned}
\] & \[
\begin{aligned}
& 1 \square \text { Yes (Reask 10b } \\
& \text { and c) } \\
& 2 \square \mathrm{No}
\end{aligned}
\] & \[
\begin{aligned}
& 1 \square \text { Yes (Reask } 10 \mathrm{~b} \\
& 2 \square \mathrm{No}
\end{aligned}
\] & \[
\begin{aligned}
& 1 \square \text { Yes (Reask } 10 \mathrm{~b} \\
& \text { and } \mathrm{c} \text { ) } \\
& 2 \square \mathrm{No}
\end{aligned}
\] \\
\hline \begin{tabular}{l}
Ask if multiple conditions, including old age, are listed in 10b. Otherwise, mark appropriate box or transcribe the only listed condition. \\
-. Which of these conditions, that is (read conditions/ would you say is the MAIN cause of the trouble?
\end{tabular} & \begin{tabular}{l}
10 for next activity with "much'/I'"unable" \\
Condition - Enter on Condition Summary Chart, THEN ask 10 for next activity with "much"/"unable."
\end{tabular} & \begin{tabular}{l}
10 for next activity with "much"'/'unable" \\
Condition - Enter on Condition Summary Chart, THEN ask 10 for next activity with "much"/"unable."
\end{tabular} & \begin{tabular}{l}
10 for next activity with "much"/"'unable" \\
Condition - Enter on Condition Summary Chart, THEN ask 10 for next activity with "much"/"'unable."
\end{tabular} & \begin{tabular}{l}
10 for next activity with "much'//'"unable" \\
Condition - Enter on Condition Summary Chart, THEN ask 10 for next activity with "much"/"'unable."
\end{tabular} \\
\hline \multicolumn{5}{|l|}{FOOTNOTES} \\
\hline
\end{tabular}


FOOTNOTES

\section*{Section O. OCCUPATION AND RETIREMENT, Continued}


FOOTNOTES


\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{5}{|c|}{Section P. CONDITIONS AND IMPAIRMENTS, Continued} \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Note - Ask 11 immediately after receiving a "Yes" in 10, then reask 10 when resuming list.}} & \multicolumn{3}{|l|}{Read to respondent - l'm going to read a list of OTHER medical conditions. Please tell me if you have EVER had any of these conditions, even if you have mentioned them before.} \\
\hline & & \multicolumn{2}{|l|}{10. Have you EVER had -} & 11. Are you NOW prevented in any way from doing any activities because of (condition)? \\
\hline \multicolumn{2}{|l|}{a. Arthritis of any kind or rheumatiam?} & \[
\left.\begin{array}{l}
1 \square \text { Yes } \\
2 \square \text { No } \\
{ }_{3} \square \mathrm{DK}
\end{array}\right\} \text { Next }
\] & & \[
\left.\begin{array}{l}
1 \square \text { Yes } \\
2 \square \text { No }
\end{array}\right\} \text { Reask } 10 \text { and resume list }
\] \\
\hline \[
\begin{aligned}
& \text { b. Osted } \\
& \text { or sof } \\
& \text { los te }
\end{aligned}
\] & \begin{tabular}{l}
s, sometimes called brittle ? \\
ro'sis)
\end{tabular} & \[
\begin{aligned}
& \left.\begin{array}{l}
\square \mathrm{Yes} \\
2 \square \mathrm{No} \\
3 \square \mathrm{DK}
\end{array}\right\} \text { Next }
\end{aligned}
\] & &  \\
\hline \multicolumn{2}{|l|}{c. A broken hip?} & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \left.\begin{array}{l}
\square \text { Yes } \\
2 \square \mathrm{No} \\
2 \\
3
\end{array}\right\} \text { Next condition }
\end{aligned}
\]} & \(\left.\begin{array}{l}1 \square \text { Yes } \\ 2 \square \text { No }\end{array}\right\}\) Reask 10 and resume list \\
\hline \multicolumn{2}{|l|}{d. Diabetee?} & \multicolumn{2}{|l|}{Yes
\[
\left.\begin{array}{l}
2 \square \text { No } \\
3 \square \text { OK }
\end{array}\right\} \text { Next condition }
\]} & \[
\left.\begin{array}{l}
1 \square \mathrm{Yes} \\
2 \square \mathrm{No}
\end{array}\right\} \text { Reask } 10 \text { and resume list }
\] \\
\hline \multicolumn{2}{|l|}{-. An aneurysm? (an'yoo rizm)} & \multicolumn{2}{|l|}{\[
\left.\begin{array}{l}
1 \square \text { Yes } \\
2 \square \text { No } \\
3 \square \text { DK }
\end{array}\right\} \text { Next condition }
\]} & Yes
\(\square\) Reask 10 and resume list \\
\hline \multicolumn{2}{|l|}{f. Any blood clots?} & \multicolumn{2}{|l|}{
Yes
No
\(\square\) Next condition} & \(\left.\begin{array}{l}1 \square \text { Yes } \\ 2 \square \text { No }\end{array}\right\}\) Reask 10 and resume list \\
\hline \multicolumn{2}{|l|}{g. Varicose veins?} & \multicolumn{2}{|l|}{\[
\left.\begin{array}{l}
1 \square \text { Yes } \\
2 \square \text { No } \\
{ }_{3} \square \text { OK }
\end{array}\right\} \text { Next condition }
\]} & \(\square\) Yes

Reask 10 and resume list \\
\hline \multicolumn{2}{|l|}{h. Hypertension, somatimes called high blood pressure?} & \multicolumn{2}{|l|}{\[
\left.\begin{array}{l}
1 \square \text { Yes } \\
{ }_{2} \square \text { No } \\
3 \square \text { DK }
\end{array}\right\} \text { Next condition }
\]} & \[
\left.\begin{array}{l}
1 \square \text { Yes } \\
2 \square \text { No }
\end{array}\right\} \text { Reask } 10 \text { and resume list }
\] \\
\hline \multicolumn{2}{|l|}{I. Rheumatic fover?} & \multicolumn{2}{|l|}{\begin{tabular}{l}
1 - Yes

No \\
Next condition
\end{tabular}} & \[
\begin{aligned}
& \left.\begin{array}{l}
\square \text { Yes } \\
2 \square \text { No }
\end{array}\right\} \text { Reask } 10 \text { and resume list } . ~
\end{aligned}
\] \\
\hline J. Rheu & heart disease? & \multicolumn{2}{|l|}{\begin{tabular}{l}
\(1 \square\) Yes
 \\
\(3 \square\) Next condition
\end{tabular}} & \[
\begin{aligned}
& \left.\begin{array}{l}
1 \text { Yes } \\
2 \square \mathrm{No}
\end{array}\right\} \text { Reask } 10 \text { and resume list }, ~
\end{aligned}
\] \\
\hline \multicolumn{2}{|l|}{k. Coronary heart disoaso?} & \multicolumn{2}{|l|}{Yes


No \(\}\)} &  \\
\hline I. Angi (pek' & & \multicolumn{2}{|l|}{\begin{tabular}{l}
\(1 \square\) Yes
No \\
.3
\(\square\) Next condition
\end{tabular}} &  \\
\hline m. A my & al infarction? & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \left.\begin{array}{l}
\square \text { Yes } \\
2 \square \text { No } \\
3 \square \mathrm{DK}
\end{array}\right\} \text { Next condition }
\end{aligned}
\]} & \(\left.\begin{array}{l}1 \square \mathrm{Yes} \\ 2 \square \mathrm{No}\end{array}\right\}\) Reask 10 and resume list \\
\hline n. Any & art attack? & \multicolumn{2}{|l|}{\begin{tabular}{l}
\(1 \square\) Yes

No \\
Next condition
\end{tabular}} & \(\left.\begin{array}{l}\left.1 \begin{array}{l}\square \\ 1 \\ 2\end{array}\right\} \text { Nos }\end{array}\right\}\) Reask 10 and resume list \\
\hline \multicolumn{2}{|l|}{O. Cancer of any kind?} & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \left.\begin{array}{l}
\square \mathrm{Yes} \\
2 \square \mathrm{No} \\
3 \square \mathrm{DK}
\end{array}\right\} \mathrm{P3}
\end{aligned}
\]} & \[
\begin{aligned}
& 1 \square \mathrm{Yes} \\
& 2 \square \mathrm{No}
\end{aligned}
\] \\
\hline P3 & Refer to answers in 10a-o & \multicolumn{3}{|r|}{All "No" or "DK" in 10a-o (12)
Other - Enter "Yes" responses in Condition Summary Chart, THEN 12} \\
\hline
\end{tabular}


\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|r|}{Section Q．HOUSING STRUCTURAL CHARACTERISTICS，ADL＇S AND SPECIAL AIDS，Continued} \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
5a．Because of a health or physical problem，do you RECEIVE help from another person to bathe，shower，or take a sponge bath？ \\
Ask if＂doesn＇t do＂＇：Is this because of a HEALTH or PHYsICAL problem？
\end{tabular}} & \begin{tabular}{l}

Yes

 \\
No \\
3 Doesn＇t do because of health／physical problem（5e）
Doesn＇t do for other reason
\end{tabular} \\
\hline \multicolumn{2}{|l|}{b．Do you NEED holp from another person to bathe，ahower，or take a sponge bath？} & \[
\begin{aligned}
& 1 \text { 口Yes } \\
& 2 \text { 口No (5d) }
\end{aligned}
\] \\
\hline \multicolumn{2}{|l|}{c．Do you NeED this help most of the time，some of the time or once in a while？} & \begin{tabular}{l}
1 Most of the time \\
\(2 \square\) Some of the time \\
3 Once in a while
\end{tabular} \\
\hline \multicolumn{2}{|l|}{d．Because of a health or physical problem do you USE any special equipment to do this？} & \[
\begin{aligned}
& 1 \text { Yes (5e) } \\
& 2 口 \mathrm{No} \\
& \hline
\end{aligned}
\] \\
\hline 01 & Refer to 5b & \[
\begin{aligned}
& 1 \square \text { Yes in } 5 \mathrm{~b}(5 e) \\
& 2 \square \text { Other (6) }
\end{aligned}
\] \\
\hline \multicolumn{2}{|l|}{\multirow[t]{5}{*}{\begin{tabular}{l}
5e．What（other）condition causes you to need［help／（and）special equipment］ to bathe，shower，or take a sponge bath？ \\
Ask if injury or operation：When did［the（injury）occur／you have the operation］？ \\
Enter injury if over 3 months ago． \\
Ask or reask 5 f if \(\mathrm{O}-3\) months injury or operation． \\
Ask if operation over 3 months ago：For what condition did you have the operation？ Enter condition．
\end{tabular}}} & \(1 \square\) Old age（5g） \\
\hline & & \\
\hline & & \\
\hline & & \\
\hline & & \\
\hline \multicolumn{2}{|l|}{f．Besides（condition），is there any other condition that causos this？} & \begin{tabular}{l}
1可es（Reask 5e and f） \\
\(2 \square \mathrm{No}(5 \mathrm{~h})\)
\end{tabular} \\
\hline \multicolumn{2}{|l|}{g．Is this caused by any（othor）specific condition？} & Yes（Reask 5e and f）

\(\qquad\)
No \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Āsk if multiple conditions，incuding old age，are listed in 5 e．Otherwise， mark appropriate box or transcribe the only listed condition． \\
h．Which of these conditions，that is（read conditions），would you say is the MAIN condition that causes you to need（help／（and）special equipment］to bathe，shower，or take a sponge bath？
\end{tabular}}} &  \\
\hline & & Condition \begin{tabular}{l} 
Enter on Condition \\
SHEN 6 S．Chart，
\end{tabular} \\
\hline \multicolumn{2}{|l|}{Ask if＇doesn＇t do＇＇：Is this because of a HEALTH or PHYSICAL problom？} & 
Yes
No
Doesn＇t do because of health／physical problem（6f）
Doesn＇t do for other reason（7） \\
\hline \multicolumn{2}{|l|}{b．Do you usually dress in street clothes？} & \[
\begin{aligned}
& \square \mathrm{Yes} \\
& { }_{2} \square \mathrm{No}
\end{aligned}
\] \\
\hline \multicolumn{2}{|l|}{c．Do you NEED help from another person to dress？} & \[
\begin{aligned}
& 1 \text { Yes } \\
& 2 \square \text { No (6e) }
\end{aligned}
\] \\
\hline \multicolumn{2}{|l|}{d．Do you NEED this help most of the time，some of the time or once in a while？} & \begin{tabular}{l}
1 Most of the time \\
\({ }_{2} \square\) Some of the time \\
\(3 \square\) Once in a while
\end{tabular} \\
\hline \multicolumn{2}{|l|}{e．Because of à health or physical problem do you UsE any special equipment to do this？} & \[
\begin{aligned}
& 1 \text { Yes (6f) } \\
& { }_{2} \text { DNo }
\end{aligned}
\] \\
\hline 02 & Refer to 6c & ```
1\squareYes in 6c (6f)
2\squareOther (7).
``` \\
\hline \multicolumn{2}{|l|}{6f．What（other）condition causes you to need［help／（and）special equipment］ to dress？} & \(1[\) Old age（ 6 h ） \\
\hline \multicolumn{2}{|r|}{Ask if injury or operation：When did［the（injury）occur／you have the operation］？} & \\
\hline \multicolumn{2}{|r|}{Enter injury if over 3 months ago．} & \\
\hline \multicolumn{2}{|r|}{Ask or reask 6 g if 0－3 months injury or operation．} & \\
\hline \multicolumn{2}{|r|}{Ask if operation over 3 months ago：For what condition did you have the operation？} &  \\
\hline & ter condition． & \[
5 .
\] \\
\hline \multicolumn{2}{|l|}{g．Besides condition，is there any other condition that causos this？} & \[
\begin{aligned}
& 1 \square \text { Yes (Reask } 6 f \text { and } g \text { ) } \\
& 2 \square \text { No (6i) }
\end{aligned}
\] \\
\hline \multicolumn{2}{|l|}{h．Is this caused by any（other）specific condition？} & \[
\begin{aligned}
& 1 \square \text { Yes (Reask 6f and g) } \\
& 2 \square \text { No }
\end{aligned}
\] \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Āsk if multiple conditions，including old age，are listed in 6 ．Otherwise， mark appropriate box or transcribe the only listed condition． \\
I．Which of these conditions，that is（read conditions），would you say is the MAIN condition that causes you to need［help／（and）special equipment］to dress？
\end{tabular}}} & \(\left.\begin{array}{l}\text { 1 } \square 0-3 \text { months injury／operation } O N L Y \\ 2 \text { Old age }\end{array}\right\}(7)\) \\
\hline & & \begin{tabular}{l} 
Enter on Condition \\
Condition \begin{tabular}{l} 
Summary Chart，
\end{tabular} \\
\hline
\end{tabular} \\
\hline
\end{tabular}


\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{Section Q. HOUSING STRUCTURAL CHARACTERISTICS, ADL'S AND SPECIAL AIDS, Continued} \\
\hline \begin{tabular}{l}
11 a . Because of a health or physical problom, do you hECEIVE help from another person to prepare your own meals? \\
Ask if "doesn't do": Is this because of a HEALTH or PHYSICAL problem?
\end{tabular} & Yes

No

Doesn't do because of
health/physical problem (11d) Doesn't do for other reason (12) \\
\hline b. Do you NeED help from another person to propare your own meala? & \[
\begin{aligned}
& \square \text { Yes } \\
& 2 \square \text { No (12) }
\end{aligned}
\] \\
\hline c. Do you Need this holp most of the time, some of the time or once in while? & \begin{tabular}{l}
Most of the time \\
\(2 \square\) Some of the time \\
\(3 \square\) Once in a while
\end{tabular} \\
\hline d. What (other) condition causes you to need help proparing your own meala? & \(1 \square\) Old age (11f) \\
\hline Ask if injury or operation: When did [the (injury) occur/you have the operation]? Enter injury if over 3 months ago. & \multirow[t]{2}{*}{1.} \\
\hline Ask or reask 11e if O-3 months injury or operation. & \\
\hline Ask if operation over 3 months ago: For what condition did you have the operation? & 2. \\
\hline Enter condition. & \\
\hline ' & \[
4 .
\] \\
\hline & 5. \\
\hline -. Besides (condition), is there any other condition that causes this & \[
\begin{aligned}
& 1 \square \text { Yes (Reask } 11 \mathrm{~d} \text { and e) } \\
& 2 \square \mathrm{No}(11 \mathrm{~g})
\end{aligned}
\] \\
\hline f. Is this caused by any (other) specific condition? & \[
\begin{aligned}
& 1 \square \text { Yes (Reask 11d and e) } \\
& 2 \square \text { No }
\end{aligned}
\] \\
\hline Āsk if multiple conditions, including old age, are listed in īd. Otherwise, mark appropriate box or transcribe the only listed condition. & \[
\left.\begin{array}{l}
1 \square 0-3 \text { months injury/operation ONLY } \\
2 \square \text { Old age }
\end{array}\right\}(12)
\] \\
\hline condition that causes you to need halp to prepare your own meale? & Condition \(\quad\)\begin{tabular}{l} 
Enter on Condition \\
Summary Chart, \\
THEN 12.
\end{tabular} \\
\hline 12a. Because of a health or physical problom, do you RECEIVE holp from another person to shop for personal items, such as toilot items or medicines? & \multirow[t]{2}{*}{
Yes

No

Doesn't do because of health/physical problem (12d)
Doesn't do for other reason (13)} \\
\hline Ask if ''doesn't do': Is this because of a HEALTH or PHYSICAL problem? & \\
\hline b. Do you NEED help from another person to shop for personal items, (such as toilet items or medicines)? & \(\square\) Yes
No (13) \\
\hline c. Do you NeED this help most of the time, some of the time or once in a while? & Most of the time

Some of the time

Once in a while \\
\hline  tollet items or medicines)? & \(1 \square\) Old age (12f) \\
\hline \begin{tabular}{l}
Ask if injury or operation: When did [the (injury) occur/you have the operation]? \\
Enter injury if over 3 months ago.
\end{tabular} & 1. \\
\hline Ask or reask 12e if 0-3 months injury or operation. & \multirow[t]{2}{*}{2.} \\
\hline Ask if operation over 3 months ago: For what condition did you have the operation? & \\
\hline Enter condition. & \\
\hline ! & 4. \\
\hline & 5. \\
\hline -. Besides (condition), is there any other condition that causes this? & ```
1\square Yes (Reask 12d and e)
2\square No(12g)
``` \\
\hline f. Is this caused by any (other) specific condition? & \begin{tabular}{l}
\(\square\) Yes (Reask 12d and e) \\
No
\end{tabular} \\
\hline Āsk if multiple conditions, including old age, are listed in \(12 \bar{d}\). Otherwise, mark appropriate box or transcribe the only listed condition. & \(\left.\begin{array}{l}1 \square 0-3 \text { months injury/operation ONLY } \\ 2 \square \text { Old age }\end{array}\right\}(13)\) \\
\hline g. Which of these conditions, that is (read conditions), would you say is the MAIN condition that causes you to need help from another person to shop for personal items, (such as toilet items or medicines)? & \begin{tabular}{l}
\(\qquad\) Enter on Condition Summary Chart, \\
Condition THEN 13.
\end{tabular} \\
\hline
\end{tabular}

\begin{tabular}{|c|c|}
\hline Section Q. HOUSING STRUCTURAL CHARACTERISTICS, ADL'S & SPECIAL AIDS, Continued \\
\hline \begin{tabular}{l}
15a. Because of a healith or physical problem, do you RECEIVE help from another person to dial the telephone or to recelve calls on the tolephone? \\
Ask if "doesn't do": Is this because of a HEALTH or PHYSICAL probiom?
\end{tabular} & 
Yes
No
Doesn't do because of health/physical problem (15d)
Doesn't do for other reason (16) \\
\hline b. Do you NEED holp from another person to dial tho tolephone or to recelve calle on the telephone? & \begin{tabular}{l}
\[
1 \square
\]
\(\square\) Yes \\
\(2 \square\) \\
No (16)
\end{tabular} \\
\hline  & \begin{tabular}{l}
\(1 \square\) Most of the time \\
\(2 \square\) Some of the time \\
\(3 \square\) Once in a while
\end{tabular} \\
\hline d. What (other) condition causes you to need halp to dial the tolephone or to receive calls on the telephone? & \(1 \square\) Old age (15f) \\
\hline Ask if injury or operation: When did [the (injury) occur/you have the operation]? & \multirow[t]{2}{*}{1.} \\
\hline Enter injury if over 3 months ago. & \\
\hline Ask or reask 15e if 0-3 months injury or operation. ! & 2. \\
\hline Ask if operation over 3 months ago: For what condition did you have the operation? Enter condition. & 3. \\
\hline (ntor condion. & 4. \\
\hline 1 & \\
\hline  & \(\square\) Yes (Reask 15d and e)

No (15g) \\
\hline f. İs this caused by any (outher) specific condition? & \(1 \square\) Yes (Reask 15d and e)
\(2 \square\) No \\
\hline Ask if multiple conditions, including old age, are listed in 15 d . Otherwise, mark appropriate box or transcribe the only listed condition. & \(\left.\begin{array}{l}1 \square 0-3 \text { months injury/operation ONLY} \\ 2 \square \text { Old age }\end{array}\right\}(16)\), \\
\hline g. Which of these conditions, that is (read conditions), would you say is the MAIN condition that causes you to need holp to drat itio telephone or to recelve calls & \multirow[b]{2}{*}{Condition \(\quad\)\begin{tabular}{l} 
Enter on Condition \\
Summary Chart, \\
THEN 16.
\end{tabular}} \\
\hline on the telephone? & \\
\hline 16a. Because of a health or phyaical problem, do you RECEIVE help from another person to get outside? & \multirow[t]{3}{*}{Yes
No
Doesn't do because of health/physical problem (16d)
Doesn't do for other reason (Q7)} \\
\hline Ask if "doesn't do': Is this because of a HEALTH or PHYsical problem? & \\
\hline & \\
\hline b. Do you NEED help from another person to get outside? & \[
\begin{aligned}
& 1 \text { Yes } \\
& 2 \square \text { No (Q7) }
\end{aligned}
\] \\
\hline c. Do you NEED this help most of the time, some of the time or once in a while? & \begin{tabular}{l}
\(1 \square\) Most of the time \\
\(2 \square\) Some of the time \\
\(3 \square\) Once in a while
\end{tabular} \\
\hline d. What (other) condition causes you to need help to got outside? & \(1 \square\) Old age (16f) \\
\hline Ask if injury or operation: When did (the (injury) occur/you have the operation]? & 1. \\
\hline Ask or reask 16e if \(0-3\) months injury or operation. & \multirow[t]{2}{*}{2.} \\
\hline Ask if operation over 3 months ago: For what condition did you have the operation? & \\
\hline Enter condition. & 3. \\
\hline 1 & \multirow[t]{2}{*}{\begin{tabular}{l}
4. \\
5. \(\qquad\)
\end{tabular}} \\
\hline & \\
\hline e. Bosides (condition), is there any other condition that causes this? & \begin{tabular}{l}
\(1 \square\) Yes (Reask 16d and e) \\
\({ }_{2} \square\) No (16g)
\end{tabular} \\
\hline f. Is this caused by any (other) specific condition? & ```
1\square Yes (Reask 16d and e)
2\squareNo
``` \\
\hline Āsk if multiple conditions, including old age, are listed in 16 d . Otherwise, mark appropriate box or transcribe the only listed condition. & \[
\left.\begin{array}{l}
1 \square 0-3 \text { months injury/operation ONLY} \\
2 \square \text { Old age }
\end{array}\right\}(Q 7)
\] \\
\hline g. Which of these conditions, that is (read conditions), would you say is the MAIN condition that causes you to need halp to got outaide? & \begin{tabular}{ll} 
& \begin{tabular}{l} 
Enter on Condition \\
Summary Chart,
\end{tabular} \\
THEN Q7.
\end{tabular} \\
\hline
\end{tabular}




\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{5}{|l|}{Section S. HEALTH OPINIONS AND BEHAVIOR, Continued} \\
\hline \multicolumn{5}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Hand card SS8 \\
Read to respondent - I am going to read a list of ways you may sometimes feel. Please tell me how often you have felt this way DURING THE PAST WEEK: rarely or none of the time; some or a little of the time; occasionally or a moderate amount of time; or most or all of the time.
\end{tabular}}} \\
\hline & & & & \\
\hline 8. During the past wook, (that would be from last (day) through today, , how often - & Rarely or none of the time (less than 1 day) & \[
\begin{gathered}
\text { Some or a } \\
\text { litite of } \\
\text { the time } \\
11-2 \text { days) }
\end{gathered}
\] & Occasionally or a moderate amount of time (3-4 days) & \[
\begin{aligned}
& \text { Most or } \\
& \text { all of } \\
& \text { the time } \\
& \text { (5-7 davs) }
\end{aligned}
\] \\
\hline a. Were you bothered by things that usually don't bother you? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \({ }_{4} \square\) \\
\hline b. Did you not feol like eating; your appetite was poor? & \(1 \square\) & \(2 \square\) & \(3 \square\) & \(4 \square\) \\
\hline c. Did you foel that you could not shake off the blues even with holp from your family or frionds? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline \begin{tabular}{l}
Reask 8 \\
d. Did you fool that you wore just as good as other people?
\end{tabular} & \(1 \square\) & \(2 \square\) & \(3 \square\) & \(4 \square\) \\
\hline -. Did you have trouble keoping your mind on what you were doling? & , \(\square\) & \(2 \square\) & \({ }_{3} \square\) & 4 \(\square\) \\
\hline f. Did you foel depressed? & \(1 \square\) & \(2 \square\) & \(3 \square\) & \(4 \square\) \\
\hline \begin{tabular}{l}
Reask 8 \\
g. Did you foel that everything you did was an offort?
\end{tabular} & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline h. Did you feel hopaful abour the future? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & 4 \\
\hline 1. Did you think your lifo had boen a fallure? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline 1. Did you feel fearful? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & 4 \\
\hline \begin{tabular}{l}
Reask 8 \\
k. Was your sleep restless?
\end{tabular} & \(1 \square\) & \({ }_{2} \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline 1. Wore you happy? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \({ }_{4} \square\) \\
\hline \(m\). Did you talk less than usual? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & 4口 \\
\hline n. Did you feel lonely? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline \begin{tabular}{l}
Reask 8 \\
o. Were people unfriendly?
\end{tabular} & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & 4] \\
\hline p. Did you enjoy lifor & , \(\square\) & \(2 \square\) & \({ }_{3} \square\) & \({ }_{4} \square\) \\
\hline 9. Did you have crying spolls? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline r. Did you feel sad? & \(1 口\) & \(2 \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline 3. Did you fool that peoplo dislliked you? & \(1 \square\) & \(2 \square\) & \({ }_{3} \square\) & \(4 \square\) \\
\hline 1. Could you not got "going'? & , \(\square\) & \(2 \square\) & \({ }^{\square} \square\) & \(4 \square\) \\
\hline \begin{tabular}{l}
9. Now I'm going to read you a list of thinge people have told us they have sometimes done. In the past week, that would be from last (day) through today, - \\
a. Did you forget any Important things like taking medicine or paying bills?
\end{tabular} & \multicolumn{4}{|l|}{\begin{tabular}{l}
\(1 \square\) \(\square\) Yes
No \\
\(3 \square\) DK
\end{tabular}} \\
\hline b. Did you have difficulty romembering dates? & \multicolumn{4}{|l|}{\(1 \square\) \(\square\) Yes
\(\square\) \(3 \square\) No D D
} \\
\hline c. Did you have difficulty remembering the time, like the time for an appointment? & \multicolumn{4}{|l|}{\begin{tabular}{l}
\(1 \square\) \(\square\) Yes

 \\
3 No

\end{tabular}} \\
\hline d. Did you lose your way or have difficulty finding your way back? & \multicolumn{4}{|l|}{\(1 \square \mathrm{Yes}\) \(2 \square \mathrm{No}\) \({ }_{3}\) DK} \\
\hline 10. Are you now taking any prescription medicine for your nerves, like medicine to calm you down or to help depression? & \multicolumn{4}{|l|}{} \\
\hline 11. (Besides the medicine) Are you now recelving treatment or counseling for a mental or emotional problem? & \multicolumn{4}{|l|}{\(\left.\begin{array}{l}\begin{array}{l}\square \text { Yes } \\ 2 \\ 3 \\ 3 \\ \text { No } \\ \text { DK }\end{array}\end{array}\right\}\) Go to Condition Summary Chart} \\
\hline
\end{tabular}


\section*{Section U. CONDITION SUMMARY CHART}

INSTRUCTIONS - If no entries in Summary Chart, complete cover page and any additional supplement booklets required

All conditions in Summary Chart must be accounted for. Compare to C 2 in HIS-1 for sample person.
1. If a condition page is already filled, enter the condition number in the diagonal space on the Summary Chart.
2. If a condition page is not filled, complete a lettered supplement condition page and enter the letter in the diagonal space.
3. If the condition wording on the HIS-1 and the Summary Chart are similar but not identical, probe: Summary Chart are similar but not identical, probe: is the (supplement condition) the same condition

If any doubt, fill a supplement condition page.


FOOTNOTES

\section*{Appendix IV}

Supplement on Aging

\section*{Reinterview Questions}
\(\square\) No eligible sample person (end interview)
\(\qquad\)
Sample Person Name
Sample Parson Number \(\qquad\)


FORM HIS-R. 1 (1984) (1-18-84)




\title{
Appendix V \\ Definition of selected terms in the 1984 Supplement on Aging (Taken from the SOA Interviewer's Manual)
}

\section*{Community services}

Meals on Wheels-A service that delivers hot meals to the persons in their homes.

Special meal program-Meals provided by a program or group on a regular or daily basis at a location outside the participants' homes.

Homemaker service-A program that provides help in the home with cleaning, cooking, and, sometimes, shopping.

Visiting nurse service-A registered nurse employed by a social service agency to provide medical care to persons in their homes.

Health aide-An individual, not a registered nurse or doctor (as defined by NHIS), employed in the health profession to provide medical or health assistance to people in their homes.

Adult day care or day care for the elderly-A place, operated by public or private funds, that provides day care for older persons on a nonresident basis.

\section*{Retirement terms}

Retired (Completely, partially, or not at all)—These terms are respondent defined.

Retirement income-This term is respondent defined.
Dependent or survivor-Persons who receive payment as a result of their relationship to someone who is or was eligible for payments from some program.

Pension-Income paid following termination of work to a person who was employed by the particular business, company, or organization providing the benefits. Pensions may also be paid to the survivors of deceased employees.

Military retirement and Veterans Administration (VA) pensions-Income paid by the Federal Government to persons who retire from the military after 20 or more years of service as military retirement. Payments may be made to survivors. VA pensions differ from military retirement in that they are based on need, number of dependents, and nonservice connected disabilities or age. A VA pension received because of a disability should be reported in question 6. A VA pension received for other reasons should be reported as "some other source" in 3b. Interviewers probed for the distinction, if necessary.

Own work experience-Those persons who receive retirement income because they themselves have worked a certain number of years or otherwise are themselves eligible for the benefit.

Social Security-Includes such programs as retirement insurance and survivor's insurance that provides payments either because the person is eligible or is a dependent or survivor of someone who was eligible because of work experience.

Disability (in disability income)-This term is respondent defined.

\section*{Condition related terms}

Ever-Present at any time in the person's life through the Sunday night prior to the day of interview. Onset during the interview week is not included.

Now-Present at any time during the past 2 weeks through the Sunday night prior to the day of interview.

Past 12 months-The period beginning with the 12-month date specified for this interview and ending the Sunday night prior to the day of interview.

\section*{ADL's and IADL's}

Special equipment-Aids or devices used to assist the person in a particular activity, such as canes, walkers, artificial limbs, and special plates. It also includes modifications to the home environment, such as lowered or raised commodes, lowered or raised kitchen equipment, and ramps.

Getting outside-Moving from inside the unit to outside, including to a patio, porch, or to a building hallway. It does not imply any real movement or exertion once the person has reached the outside.

Bed-Anything used for lying down or sleeping including sofa, cot, or mattress.

Paid help-A voluntary reimbursement. It also includes cases where no cash is received but the helper gets pay-in-kind or room and board for the help.

\section*{Other terms}

Adopted children-Children for whom the sample person has been voluntarily or legally declared as the mother, father, or legal guardian.

Stepchildren-Children of the sample person's spouse by a former marriage.

Stepbrother or stepsister-The son or daughter of the sample person's stepfather or stepmother.

Retirement community, building, or complex-A house or an apartment is considered to be a retirement community, building, or complex if there is a formal arrangement or rules setting aside a group of units for this use or purpose. A person is not residing in a retirement community, building, or complex only because the majority of people in the city, neighborhood, building, or complex are retired.
' Medical services-Services provided on the premises by trained medical professionals, including doctors, nurses, or medical technicians.

Mortgage-A long-term loan with the property as security. A mortgage can be financed through a bank, a savings and loan, a mortgage loan company, or a private person. A "land contract," "contract to purchase," or "deed of trust" in which the buyer does not receive title until all or part of the price is paid is considered a mortgage.

Mortgage principal-The current principal still owed on the mortgage; the outstanding balance on the loan amount, excluding interest, at the time of the interview.

Volunteer work-Providing a service willingly and without pay for an organization or group. This includes activities such as collecting for the March of Dimes, overseeing playground activities, or working as a hospital volunteer or at church. It does not include such events as going to the store voluntarily for a neighbor or baby sitting if this activity is not through an organized group.

Aid-Equipment or devices used to assist the person in a particular activity, such as a cane or walker, artificial limb, etc. Also include as aids special shoes, chairs, structural modifications to the home such as railings on stairs or walls, and other things normally needed for performing the activity only if they are of special construction, design, etc. or were installed specifically to assist the person in accomplishing the activity.

Eyeglasses-Includes prescription eyeglasses as well as eyeglasses purchased at drug stores, variety stores, and so forth that did not require a prescription.

Prescription eyeglasses-Eyeglasses that were obtained for the sample person under the direction or recommendation of an eye specialist, such as an ophthalmologist, an optometrist, or an optician. It does not include eyeglasses prescribed for someone else.

Lens implant-Artificial lenses that are surgically and permanently placed inside the eye. This is sometimes referred to as an intraocular lens.

Hearing aid-A compact amplifier worn to aid one's hearing. This does not include devices not worn by the person, such as telephone amplifiers.

Dizzy or dizziness-These terms are respondent defined.
Difficulty controlling bowels and/or urination-Difficulty controlling bowels includes accidentally soiling one's self as well as chronic inability to empty the bowels, excluding occasional constipation. Difficulty controlling urination includes accidentally wetting one's self, including occasional slight "leaking."

Colostomy or urinary catheter or other device-Surgical openings and/or devices used to aid bowel movement or urination when the person has lost natural control of these functions through illness, disability, surgery, or other causes. This does not include enemas or suppositories as devices.

Help in taking care of this device-Personal assistance or supervision is required and/or received in operating, maintaining, or cleaning the device, in emptying the bag, and so forth.

In bed or chair all or most of the time-More than half of the hours the person usually is awake.

Nursing home-A place that provides nursing and/or personal care services in addition to room and board. Nursing care may include such services as providing injections, catheterization, bowel and/or bladder retraining, and blood pressure, pulse, and respiratory checks. Personal care services include help in performing daily activities such as eating, bathing, dressing, or walking. It does not include stays in convalescent homes, sanatoria, mental institutions, or similar places.

Times stayed in a nursing home-This refers to separate stays in a nursing home, not to the number of nights in a nursing home. If the person was moved (transferred) from one nursing home to another, include each as a separate stay, even if the stay was not overnight.

Physical activity-This term is respondent defined.
Exercise-Physical activity that the person consciously performs for the sake of his/her well being. The exercise does not have to be part of a formal program or prescribed activity. Exercise includes any kind of exercise such as walking, physical fitness programs, or sports.

Regular routine-Physical exercise performed on a recurring basis at fairly even intervals, consisting of some set type of physical activity. Examples are golfing every Thursday, walking around the block twice a day, or any other activity performed routinely for exercise.

\title{
Appendix VI \\ Selected information about \\ the design and estimation of the 1984 NHIS Supplement on Aging
}

Table I. Annual weights in tape location 219-227 by age: 1984 NHIS Supplement on Aging
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow[t]{3}{*}{} & \multirow[b]{3}{*}{Item} & \multicolumn{5}{|c|}{Age in years at last birthday} \\
\hline & & \multirow[b]{2}{*}{55-64} & \multicolumn{4}{|c|}{65 and over} \\
\hline & & & Total & 65-74 & 75-84 & 85 and over \\
\hline Mean. & & 4,741 & 2,299 & 2,296 & 2,305 & 2,296 \\
\hline Median & & 4,485 & 2.174 & 2.174 & 2.168 & 2.171 \\
\hline \multicolumn{7}{|l|}{Percentile:} \\
\hline 10th & & 4,162 & 2,015 & 2,025 & 2,117 & 2,015 \\
\hline 25th & & 4,300 & 2,067 & 2,067 & 2,078 & 2,094 \\
\hline 75th & & 4,711 & 2,257 & 2,236 & 2,278 & 2,278 \\
\hline 90th & & 5,627 & 2,785 & 2,754 & 2,810 & 2,714 \\
\hline \multicolumn{7}{|l|}{Range:} \\
\hline High & & 19,279 & 9,105 & 8.827 & 9,105 & 8,876 \\
\hline Low. & & 1.280 & 398 & 398 & 1,470 & 1,495 \\
\hline
\end{tabular}

Table II. Design effects for selected data on the 1984 NHIS Supplement on Aging
\begin{tabular}{|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{Item} & \multirow[b]{2}{*}{\[
\begin{gathered}
55-64 \\
\text { years }
\end{gathered}
\]} & \multicolumn{3}{|c|}{65 years and over} \\
\hline & & Total & Male & Female \\
\hline \multicolumn{5}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Number of persons. \\
Percent of persons:
\end{tabular}}} \\
\hline & & & & \\
\hline Ages 80 years and over. & & 1.5678 & 1.0000 & 1.3212 \\
\hline Living alone & 1.4742 & 1.9996 & 1.6921 & 1.7340 \\
\hline \multicolumn{5}{|l|}{Percent of persons with:} \\
\hline Some college. & 1.4334 & 1.5988 & 1.4564 & 1.3142 \\
\hline 1 or more children & 1.0000 & 1.9640 & 1.4791 & 1.4346 \\
\hline 1 or more ADL's \({ }^{1}\) & 1.0000 & 1.6118 & 1.1952 & 1.3740 \\
\hline 1 or more IADL's \({ }^{2}\). & 1.0797 & 1.7226 & 1.0000 & 1.6698 \\
\hline 1 or more bed days in past 12 months. & 1.1180 & 1.4663 & 1.2124 & 1.0755 \\
\hline 1 or more hospital episodes in past 12 months & 1.0000 & 1.0000 & 1.1794 & 1.0000 \\
\hline 1 or more community services used in past 12 months & 1.2551 & 2.0837 & 1.5796 & 1.4146 \\
\hline \multicolumn{5}{|l|}{Average number of:} \\
\hline Bed days (12 months) & 1.0000 & 1.4072 & 1.2873 & 1.1623 \\
\hline Bed days (2-week recall) & 1.0941 & 1.1110 & 1.0000 & 1.1260 \\
\hline Doctor contacts (2-week recall) & 1.1082 & 1.0900 & 1.0000 & 1.0000 \\
\hline Acute conditions (2-week recall) & 1.3088 & 1.0000 & 1.0000 & 1.0000 \\
\hline
\end{tabular}

\footnotetext{
\({ }^{1}\) Activities of daily living.
\({ }^{2}\) Instrumental activities of daily living.
NOTE: Design effects are the ratios of variances. For standard errors, take the square root.
}

Table III: Number of sample persons in the 1984 Supplement on Aging, by pseudoprimary sampling unit (PSU) and age
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{PSU} & \multirow[b]{2}{*}{\[
A l \prime
\]
ages} & \multicolumn{4}{|c|}{Age in years at last birthday} & \multirow[b]{2}{*}{PSU} & \multirow[b]{2}{*}{\[
\begin{gathered}
\text { All } \\
\text { ages }
\end{gathered}
\]} & \multicolumn{4}{|c|}{Age in years at last birthday} \\
\hline & & 55-64 & 65-74 & 75-84 & 85 and over & & & 55-64 & 65-74 & 75-84 & 85 and over \\
\hline \multirow[t]{2}{*}{Total .} & 16,148 & 4.651 & 7,093 & 3,578 & 826 & 70...... & 32 & 10 & 13 & 8 & 1 \\
\hline & & & & & & \(71 . .\). & 37 & 10 & 14 & 9 & 4 \\
\hline \(1 \ldots .\). & 22 & 7 & 8 & 5 & 2 & 72 & 29 & 11 & 12 & 4 & 2 \\
\hline 2 & 20 & 5 & 8 & 5 & 2 & 73 & 39 & 11 & 16 & 8 & 4 \\
\hline 3 & 32 & 14 & 9 & 9 & 0 & 74 & 31 & 8 & 12 & 10 & 1 \\
\hline 4 & 13 & 4 & 4 & 3 & 2 & 75. & 23 & 3 & 9 & 8 & 3 \\
\hline 5 & 35 & 11 & 14 & 9 & 1 & 76.... & 19 & 4 & 6 & 8 & 1 \\
\hline 6 & 47 & 11 & 23 & 9 & 4 & 77. & 18 & 7 & 5 & 5 & 1 \\
\hline 7 & 34 & 9 & 15 & 10 & 0 & 78..... & 28 & 7 & 11 & 7 & 3 \\
\hline 8. & 38 & 10 & 18 & 8 & 2 & \(79 . .\). & 23 & 5 & 11 & 6 & 1 \\
\hline 9. & 47 & 12 & 23 & 10 & 2 & \(80 . .\). & 26 & 11 & 8 & 6 & 1 \\
\hline 10 & 32 & 8 & 14 & 8 & 2 & 81 & 20 & 3 & 6 & 8 & 3 \\
\hline 11 & 21 & 5 & 8 & 6 & 2 & 82 & 21 & 11 & 7 & 2 & 1 \\
\hline 12 & 94 & 11 & 44 & 35 & 4 & 83 & 24 & 7 & 9 & 6 & 2 \\
\hline 13 & 32 & 6 & 13 & 11 & 2 & 84 & 36 & 8 & 15 & 8 & 5 \\
\hline 14 & 33 & 12 & 14 & 6 & 1 & 85 & 39 & 12 & 18 & 7 & 2 \\
\hline 15 & 27 & 8 & 15 & 4 & 0 & 86. & 25 & 5 & 10 & 7 & 3 \\
\hline 16 & 40 & 7 & 17 & 14 & 2 & 87 & 25 & 6 & 13 & 5 & 1 \\
\hline 17 & 23 & 8 & 11 & 4 & 0 & 88 & 15 & 4 & 7 & 4 & 0 \\
\hline 18 & 26 & 7 & 13 & 6 & 0 & 89 & 23 & 8 & 10 & 5 & 0 \\
\hline 19 & 40 & 9 & 18 & 11 & 2 & 90. & 26 & 6 & 15 & 5 & 0 \\
\hline 20 & 37 & 12 & 13 & 9 & 3 & 91 & 22 & 7 & 9 & 6 & 0 \\
\hline 21. & 78 & 23 & 37 & 15 & 3 & 92 & 26 & 9 & 10 & 6 & 1 \\
\hline 22 & 87 & 26 & 34 & 22 & 5 & 93 & 23 & 2 & 13 & 8 & 0 \\
\hline 23 & 133 & 45 & 62 & 21 & 5 & 94 & 17 & 5 & 7 & 5 & 0 \\
\hline 24 & 158 & 40 & 75 & 30 & 13 & 95 & 9 & 5 & 2 & 1 & 1 \\
\hline \(25 \ldots \ldots\) & 132 & 35 & 61 & 27 & 9 & 95 & 30 & 10 & 3 & 11 & 6 \\
\hline 26 & 128 & 46 & 52 & 25 & 5 & 97. & 28 & 11 & 9 & 5 & 3 \\
\hline 27. & 154 & 57 & 62 & 24 & 11 & 98. & 45 & 13 & 17 & 13 & 2 \\
\hline 28. & 184 & 62 & 77 & 37 & 8 & 99. & 30 & 10 & 13 & 5 & 2 \\
\hline 29. & 181 & 53 & 76 & 43 & 9 & 100. & 15 & 6 & 3 & 6 & 0 \\
\hline 30. & 226 & 70 & 104 & 43 & 9 & 101. & 36 & 11 & 9 & 10 & 6 \\
\hline 31. & 187 & 77 & 72 & 33 & 5 & 102. & 34 & 13 & 12 & 7 & 2 \\
\hline 32. & 170 & 49 & 71 & 41 & 9 & 103. & 23 & 8 & 10 & 5 & 0 \\
\hline 33 & 77 & 26 & 32 & 18 & 1 & 104. & 26 & 9 & 5 & 9 & 3 \\
\hline 34 & 72 & 13 & 33 & 22 & 4 & 105. & 20 & 4 & 10 & 4 & 2 \\
\hline 35 & 111 & 34 & 43 & 26 & 8 & 106. & 52 & 5 & 18 & 22 & 7 \\
\hline 36. & 112 & 33 & 54 & 18 & 7 & 107. & 26 & 1 & 16 & 6 & 3 \\
\hline 37. & 104 & 26 & 51 & 23 & 4 & 108. & 14 & 7 & 3 & 4 & 0 \\
\hline 38. & 114 & 34 & 47 & 26 & 7 & 109. & 23 & 5 & 13 & 4 & 1 \\
\hline 39. & 173 & 51 & 87 & 25 & 10 & 110. & 24 & 11 & 8 & 5 & 0 \\
\hline 40. & 210 & 63 & 96 & 42 & 9 & 111. & 47 & 13 & 22 & 12 & 0 \\
\hline 41. & 157 & 56 & 70 & 27 & 4 & 112. & 23 & 7 & 10 & 5 & 1 \\
\hline 42. & 168 & 38 & 91 & 34 & 5 & 113. & 30 & 7 & 16 & 7 & 0 \\
\hline 43. & 27 & 6 & 9 & 12 & 0 & 114. & 26 & 7 & 10 & 7 & 2 \\
\hline 44. & 24 & 8 & 10 & 6 & 0 & 115. & 121 & 38 & 56 & 21 & 6 \\
\hline 45 & 16 & 6 & 6 & 2 & 2 & 116. & 109 & 21 & 52 & 26 & 10 \\
\hline 46. & 28 & 6 & 15 & 4 & 3 & 117. & 128 & 36 & 58 & 23 & 11 \\
\hline 47. & 41 & 9 & 22 & 7 & 3 & 118. & 120 & 47 & 42 & 28 & 3 \\
\hline 48. & 32 & 3 & 16 & 11 & 2 & 119. & 103 & 28 & 56 & 13 & 6 \\
\hline 49. & 29 & 7 & 10 & 10 & 2 & 120. & 90 & 28 & 41 & 19 & 2 \\
\hline 50 & 28 & 5 & 15 & 7 & 1 & 121. & 125 & 36 & 53 & 29 & 7 \\
\hline 51. & 25 & 9 & 10 & 6 & 0 & 122. & 100 & 26 & 47 & 21 & 6 \\
\hline 52 & 23 & 7 & 8 & 6 & 2 & 123. & 112 & 29 & 49 & 28 & 6 \\
\hline 53 & 26 & 9 & 11 & 3 & 3 & 124. & 109 & 34 & 46 & 23 & 6 \\
\hline 54 & 22 & 4 & 11 & 7 & 0 & 125. & 135 & 47 & 53 & 27 & 8 \\
\hline 55. & 23 & 4 & 11 & 8 & 0 & 126. & 126 & 52 & 50 & 22 & 2 \\
\hline 56. & 31 & 9 & 12 & 8 & 2 & 127. & 99 & 24 & 39 & 29 & 7 \\
\hline 57. & 24 & 5 & 7 & 9 & 3 & 128. & 92 & 26 & 50 & 14 & 2 \\
\hline 58 & 32 & 7 & 15 & 7 & 3 & 129. & 141 & 38 & 80 & 18 & 5 \\
\hline 59. & 30 & 9 & 12 & 6 & 3 & 130. & 160 & 51 & 71 & 30 & 8 \\
\hline 60. & 16 & 7 & 3 & 1 & 5 & 131. & 119 & 40 & 46 & 25 & 8 \\
\hline 61. & 25 & 12 & 7 & 4 & 2 & 132. & 91 & 27 & 38 & 22 & 4 \\
\hline 62 & 32 & 10 & 19 & 3 & 0 & 133. & 71 & 24 & 32 & 12 & 3 \\
\hline 63 & 36 & 13 & 14 & 7 & 2 & 134. & 62 & 21 & 28 & 9 & 4 \\
\hline 64 & 32 & 6 & 13 & 10 & 3 & 135. & 23 & 7 & 7 & 8 & 1 \\
\hline 65 & 36 & 15 & 14 & 6 & 1 & 136. & 27 & 13 & 8 & 6 & 0 \\
\hline 66. & 27 & 10 & 11 & 4 & 2 & 137. & 38 & 12 & 20 & 5 & , \\
\hline 67. & 19 & 3 & 4 & 8 & 4 & 138. & 21 & 6 & 10 & 5 & 0 \\
\hline 68 & 18 & 5 & 6 & 7 & 0 & 139. & 26 & 6 & 12 & 5 & 3 \\
\hline 69 & 21 & 11 & 6 & 4 & 0 & 140. & 25 & 8 & 10 & 5 & 2 \\
\hline
\end{tabular}

Table III: Number of sample persons in the 1984 Supplement on Aging, by pseudoprimary sampling unit (PSU) and age-Con.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{PSU} & \multirow[b]{2}{*}{All ages} & \multicolumn{4}{|c|}{Age in years at last birthday} & \multirow[b]{2}{*}{PSU} & \multirow[b]{2}{*}{\[
\begin{gathered}
\text { All } \\
\text { ages }
\end{gathered}
\]} & \multicolumn{4}{|c|}{Age in years at last birthday} \\
\hline & & 55-64 & 65-74 & 75-84 & 85 and over & & & 55-64 & 65-74 & 75-84 & 85 and over \\
\hline 141 & 24 & 10 & 10 & 4 & 0 & 212. & 35 & 9 & 13 & 11 & 2 \\
\hline 142 & 39 & 8 & 20 & 10 & 1 & 213. & 22 & 7 & 8 & 6 & 1 \\
\hline 143. & 31 & 13 & 11 & 4 & 3 & 214.. & 21 & 3 & 7 & 10 & 1 \\
\hline 144 & 52 & 12 & 26 & 12 & 2 & 215. & 37 & 7 & 22 & 7 & 1 \\
\hline 145. & 25 & 5 & 10 & 6 & 4 & 216. & 25 & 6 & 9 & 7 & 3 \\
\hline 146 & 27 & 4 & 18 & 4 & 1 & 217. & 21 & 4 & 14 & 3 & 0 \\
\hline 147. & 42 & 7 & 21 & 11 & 3 & 218. & 23 & 7 & 13 & 2 & 1 \\
\hline 148. & 28 & 7 & 10 & 9 & 2 & 219. & 33 & 8 & 14 & 10 & 1 \\
\hline 149. & 35 & 11 & 19 & 5 & 0 & 220. & 20 & 9 & 7 & 3 & 1 \\
\hline 150. & 27 & 6 & 13 & 7 & 1 & 221.. & 43 & 10 & 18 & 15 & 0 \\
\hline 151. & 34 & 10 & 16 & 7 & 1 & 222.. & 40 & 10 & 20 & 9 & 1 \\
\hline 152. & 36 & 8 & 19 & 9 & 0 & 223. & 20 & 6 & 10 & 3 & 1 \\
\hline 153. & 55 & 10 & 36 & 9 & 0 & 224.. & 48 & 14 & 18 & 14 & 2 \\
\hline 154. & 35 & 10 & 20 & 5 & 0 & 225. & 24 & 8 & 12 & 3 & 1 \\
\hline 155 & 16 & 7 & 6 & 3 & 0 & 226. & 37 & 18 & 9 & 9 & 1 \\
\hline 156. & 24 & 7 & 12 & 4 & 1 & 227. & 35 & 11 & 17 & 4 & 3 \\
\hline 157. & 22 & 7 & 9 & 4 & 2 & 228. & 35 & 7 & 20 & 5 & 3 \\
\hline 158. & 30 & 12 & 10 & 5 & 3 & 229. & 32 & 6 & 17 & 7 & 2 \\
\hline 159. & 31 & 8 & 17 & 6 & 0 & 230. & 18 & 4 & 8 & 6 & 0 \\
\hline 160. & 51 & 10 & 24 & 8 & 9 & 231. & 32 & 6 & 16 & 9 & 1 \\
\hline 161. & 27 & 10 & 9 & 7 & 1 & 232. & 25 & 2 & 14 & 8 & 1 \\
\hline 162. & 30 & 10 & 15 & 4 & 1 & 233. & 22 & 6 & 12 & 2 & 2 \\
\hline 163. & 13 & 8 & 5 & 0 & 0 & 234. & 29 & 11 & 8 & 8 & 2 \\
\hline 164. & 28 & 7 & 9 & 10 & 2 & 235 & 36 & 8 & 15 & 10 & 3 \\
\hline 165. & 51 & 18 & 23 & 8 & 2 & 236. & 60 & 9 & 34 & 17 & 0 \\
\hline 166 & 25 & 6 & 15 & 3 & 1 & 237. & 126 & 38 & 41 & 43 & 4 \\
\hline 167. & 31 & 6 & 15 & 8 & 2 & 238. & 129 & 43 & 60 & 22 & 4 \\
\hline 168. & 21 & 3 & 8 & 10 & 0 & 239. & 94 & 28 & 44 & 17 & 5 \\
\hline 169. & 22 & 3 & 12 & 6 & 1 & 240. & 107 & 24 & 53 & 26 & 4 \\
\hline 170. & 33 & 4 & 16 & 12 & 1 & 241. & 110 & 43 & 43 & 15 & 9 \\
\hline 171. & 28 & 7 & 14 & 6 & 1 & 242. & 119 & 47 & 41 & 26 & 5 \\
\hline 172. & 25 & 9 & 10 & 4 & 2 & 243. & 69 & 21 & 32 & 13 & 3 \\
\hline 173. & 24 & 10 & 8 & 3 & 3 & 244. & 73 & 21 & 30 & 19 & 3 \\
\hline 174. & 20 & 7 & 9 & 4 & 0 & 245. & 107 & 29 & 48 & 28 & 2 \\
\hline 175. & 25 & 4 & 8 & 13 & 0 & 246. & 112 & 38 & 45 & 24 & 5 \\
\hline 176. & 6 & 3 & 0 & 3 & 0 & 247. & 84 & 32 & 35 & 14 & 3 \\
\hline 177. & 25 & 9 & 6 & 6 & 4 & 248. & 109 & 30 & 51 & 21 & 7 \\
\hline 178.. & 19 & 5 & 7 & 7 & 0 & 249. & 105 & 29 & 52 & 22 & 2 \\
\hline 179.. & 23 & 9 & 12 & 1 & 1 & 250 & 115 & 38 & 50 & 25 & 2 \\
\hline 180. & 22 & 8 & 6 & 6 & 2 & 251. & 119 & 40 & 47 & 24 & 8 \\
\hline 181. & 21 & 6 & 8 & 6 & 1 & 252. & 126 & 36 & 56 & 26 & 8 \\
\hline 182. & 18 & 3 & 8 & 7 & 0 & 253. & 254 & 67 & 107 & 67 & 13 \\
\hline 183. & 16 & 6 & 6 & 4 & 0 & 254. & 279 & 64 & 119 & 84 & 12 \\
\hline 184. & 26 & 8 & 13 & 3 & 2 & 255. & 61 & 13 & 30 & 14 & 4 \\
\hline 185. & 38 & 14 & 18 & 5 & 1 & 256. & 59 & 15 & 32 & 11 & 1 \\
\hline 186. & 28 & 8 & 15 & 3 & 2 & 257. & 41 & 13 & 13 & 15 & 0 \\
\hline 187. & 39 & 9 & 26 & 3 & 1 & 258. & 62 & 14 & 35 & 10 & 3 \\
\hline 188. & 14 & 2 & 10 & 2 & 0 & 259. & 36 & 9 & 17 & 10 & 0 \\
\hline 189. & 38 & 10 & 24 & 3 & 1 & 260. & 71 & 16 & 43 & 9 & 3 \\
\hline 190. & 30 & 8 & 16 & 6 & 0 & 261. & 45 & 11 & 22 & 11 & 1 \\
\hline 191. & 18 & 7 & 9 & 2 & 0 & 262. & 32 & 10 & 9 & 11 & 2 \\
\hline 192. & 19 & 6 & 9 & 4 & 0 & 263. & 38 & 12 & 19 & 6 & 1 \\
\hline 193. & 86 & 16 & 46 & 18 & 6 & 264. & 40 & 10 & 16 & 14 & 0 \\
\hline 194. & 28 & 8 & 14 & 6 & 0 & 265. & 39 & 8 & 18 & 6 & 7 \\
\hline 195. & 16 & 3 & 5 & 6 & 2 & 266. & 31 & 2 & 19 & 8 & 2 \\
\hline 196. & 32 & 8 & 8 & 13 & 3 & 267. & 25 & 5 & 16 & 3 & 1 \\
\hline 197. & 11 & 3 & 6 & 2 & 0 & 268. & 19 & 6 & 10 & 2 & 1 \\
\hline 198. & 23 & 9 & 9 & 4 & 1 & 269. & 28 & 8 & 11 & 9 & 0 \\
\hline 199. & 20 & 2 & 6 & 8 & 4 & 270. & 52 & 13 & 22 & 14 & 3 \\
\hline 200. & 62 & 11 & 28 & 18 & 5 & 271. & 29 & 7 & 15 & 6 & 1 \\
\hline 201. & 26 & 7 & 8 & 10 & 1 & 272. & 15 & 8 & 6 & 1 & 0 \\
\hline 202. & 31 & 5 & 18 & 4 & 4 & 273. & 28 & 10 & 10 & 5 & 3 \\
\hline 203. & 33 & 9 & 11 & 10 & 3 & 274. & 32 & 9 & 16 & 7 & 0 \\
\hline 204. & 23 & 6 & 10 & 5 & 2 & 275. & 12 & 2 & 6 & 3 & 1 \\
\hline 205. & 29 & 12 & 8 & 8 & 1 & 276. & 27 & 9 & 10 & 7 & 1 \\
\hline 206. & 42 & 11 & 11 & 18 & 2 & 277. & 35 & 13 & 16 & 4 & 2 \\
\hline 207. & 28 & 6 & 17 & 4 & 1 & 278. & 14 & 5 & 5 & 4 & 0 \\
\hline 208. & 26 & 8 & 8 & 9 & 1 & 279. & 23 & 6 & 9 & 5 & 3 \\
\hline 209. & 27 & 7 & 16 & 3 & 1 & 280. & 5 & 0 & 5 & 0 & 0 \\
\hline 210. & 34 & 11 & 13 & 9 & 1 & 281. & 31 & 10 & 12 & 8 & 1 \\
\hline 211..... & 21 & 6 & 11 & 4 & 0 & 282.... & 24 & 10 & 7 & 6 & 1 \\
\hline
\end{tabular}

Table III: Number of sample persons in the 1984 Supplement on Aging, by pseudoprimary sampling unit (PSU) and age-Con.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{PSU} & \multirow[b]{2}{*}{\[
\begin{aligned}
& \text { All } \\
& \text { ages }
\end{aligned}
\]} & \multicolumn{4}{|c|}{Age in years at last birthday} & \multirow[b]{2}{*}{PSU} & \multirow[b]{2}{*}{\[
\begin{aligned}
& \text { All } \\
& \text { ages }
\end{aligned}
\]} & \multicolumn{4}{|c|}{Age in years at last birthday} \\
\hline & & 55-64 & 65-74 & 75-84 & 85 and over & & & 55-64 & 65-74 & 75-84 & 85 and over \\
\hline 283 & 157 & 40 & 69 & 31 & 17 & 291. & 112 & 30 & 49 & 24 & 9 \\
\hline 284 & 158 & 52 & 66 & 34 & 6 & 292 & 119 & 24 & 67 & 24 & 4 \\
\hline 285 & 143 & 40 & 58 & 37 & 8 & 293 & 186 & 49 & 82 & 44 & 11 \\
\hline 286 ' & 136 & 31 & 62 & 32 & 11 & 294 & 141 & 45 & 63 & 30 & 3 \\
\hline 287. & 99 & 28 & 44 & 22 & 5 & 295 & 106 & 36 & 42 & 24 & 4 \\
\hline 288. & 81 & 23 & 37 & 17 & 4 & 296 & 81 & 21 & 39 & 15 & 6 \\
\hline 289 & 150 & 44 & 54 & 42 & 10 & 297 & 109 & 32 & 46 & 26 & 5 \\
\hline 290. & 122 & 43 & 54 & 20 & 5 & 298 & 106 & 36 & 39 & 24 & 7 \\
\hline
\end{tabular}

\section*{Appendix VII \\ Examples using SAS}

These examples are all based on the assumption that the following scheme has been used to convert the public-use person file for the Supplement on Aging to a SAS file named NEW.SOA
\[
\begin{aligned}
\mathrm{P} \#= & \text { variable from the Basic NHIS persons' file with } \\
& \text { \# indicates the first field of the tape location. } \\
\mathrm{xWGT} & =\text { a weight with } \mathrm{x} \text { indicating the kind of weight. } \\
\text { PSU }= & \text { pseudo primary sampling unit. } \\
\text { S\# } & \text { variable from the SOA with \# indicating the } \\
& \text { first field of the tape location. }
\end{aligned}
\]

The input statenient would have the format:
INPUT;
INFILE
P25 25 P27 27-28
PSU 187-189
QWGT 201-209 SWGT 210-218
AWGT 219-227
BDWGT 246-254
S404 404 S409 409-410...;
IF statements or other recoding statements:
(1) to change the unknowns and nonresponse (usually, but not always, coded as " 9 " on NHIS tapes) to a SAS format for unknowns, and
(2) to create recodes.
*The user should be careful not to confuse data not recorded because of a skip pattern with data not recorded because the person did not answer the question.
*Recodes are optional; however, the following one is needed to estimate variances:
```

STRATUM = PSU/2 + 0.5;
STRATUM = INT(STRATUM);
LENGTH 3;
*sets 3 as the default to save space;

```

LENGTH QWGT SWGT AWGT BWGT 8 ;
*the weights need more space;
LABEL and other statements as desired ;

\section*{Examples of national estimates}

DATA;
SET NEW.SOA;
PROC FREQ;

\section*{TABLES}

S404 * P111 / NOROW NOCOL NOPERCENT: WEIGHT AWGT;
TITLE1 'The number of people age 55 and over';
TITLE2 'according to the number of bed days';
TITLE3 'in the preceding year';
DATA ;
SET NEW.SOA;
NEWWGT = P132*SWGT;
PROC FREQ;
TABLES
S404* P111;
WEIGHT NEWWGT;
TITLE1 'The number of people age 55 and over';
TITLE2 'according to the number of bed days';
TITLE3 'in the preceding year';
Tables can be made much more sophisticated by changing the options, recoding variables, or using PROC TABULATE. Note that in PROC TABULATE if any records have missing values for one variable in the table, those records will be deleted from the entire table.

Users producing tables under such procedures will have to rely on the NHIS variance curves or on average design effects to make adjustments for the sample design if they wish to show confidence intervals or to test hypotheses.

DO NOT rely on the test statistics that can be produced from such tables when weighted. Test statistics that are produced by options are incorrect because (a) they are based on assumptions of simple random sampling and equal probability of selection, and (b) the programs assume that the weighted sample is the true sample.

\section*{Examples of national estimates with standard errors}

By using SESUDAAN, \({ }^{42}\) which runs under SAS but is not available from the SAS Institute, analysts can obtain estimated standard errors for each point estimate. The program also produces design effects if requested as they are in the sample. Data must be sorted by stratum and PSU for the program to work properly.

\section*{DATA;}

SET NEW.SOA;

\footnotetext{
NOTE: A list of references follows the text.
}

PROC SORT;
BY STRATUM PSU;
PROC SESUDAAN ALLFOILS DEFT
PSULVL \(=2\) STRLVL \(=1\);
REPORT P25 P43 P64 S404;
LEVELS 2347 ;
ANALYSIS P71;
FOILS 4 ;
NEST STRATUM PSU;
WEIGHT AWGT;

TABLES P25 P43 P64 S404
P25 * P64
;
SETPRINT CWIDTH \(=16\) MEANDEC \(=6\)
PVALDEC \(=6\) DEFTDEC \(=4\);
TITLE1 'Sampling errors for estimated percent of people in each' ;
TITLE2 'limitation of activity group' ;
TITLE3 '1984 SOA people age 55 and over' ;
//

\title{
Appendix VIII \\ Consultants and staff of the 1984 Supplement on Aging
}

\section*{Consultants outside the National Center for Health Statistics}

Ronald Abeles, Ph.D.
National Institute on Aging
National Institutes of Health
Building 32, Room 5C05
9000 Rockville Pike
Bethesda, Md. 20892
Jacob Brody, M.D.
Dean, School of Public Health
University of Illinois at Chicago
Box 6998
Chicago, Ill. 60680
Herman Brotman
3108 Holmes Run Road
Falls Church, Va. 22046
Robert N. Butler, M.D.
Chairman, Department of Geriatrics and Adult Development
Mount Sinai School of Medicine
The Mount Sinai Medical Center
One Gustave Levy Place
New York, N.Y. 10029
John Busa
Director, Planning, Evaluation, and Analysis
Administration on Aging
330 Independence Avenue, S.W.
North Building, Room 4747
Washington, D.C. 20201
Joan Cornoni-Huntley, Ph.D.
National Institute on Aging
National Institutes of Health
Federal Building, Room 612
7550 Wisconsin Avenue
Bethesda, Md. 20892
Karen Davis, Ph.D.
Johns Hopkins University
10537 Farnham Drive
Bethesda, Md. 20814
Paul Densen, Ph.D.
Harvard Center for Community Health
643 Huntington Avenue
Boston, Mass. 02115

Donald G. Fowles
National Institute on Aging
National Institutes of Health
Building 32, Room 5C11
9000 Rockville Pike
Bethesda, Md. 20892
Sidney Katz, M.D.
Associate Dean of Medicine
Brown University, Box G
Providence, R.I. 02912
Barbara A. McCann
Hospice Project Director
Joint Commission on Accreditation of Hospitals
875 North Michigan Avenue
Chicago, Ill. 60611
Marsha Ory, Ph.D.
National Institute on Aging
National Institutes of Health
Building 32, Room 5C05
9000 Rockville Pike
Bethesda, Md. 20892
Alan Pardini
Department of Social and Behavioral Sciences
School of Nursing N631Y
University of California
San Francisco, Calif. 94143
Jon Pynoos, Ph.D.
Director, Institute for Policy and Program Development
University of Southern California
Andrus Gerontology Center
University Park MC-0191
Los Angeles, Calif. 90089
Dorothy P. Rice
Regents Lecturer
Department of Social and Behavioral Sciences
School of Nursing N631Y
University of California
San Francisco, Calif. 94143
Matilda White Riley, Ph.D.
Associate Director for Behavioral Sciences Research
National Institute on Aging
National Institutes of Health
Building 32, Room 5C05
9000 Rockville Pike
Bethesda, Md. 20892

Eva J. Salber, M.D.
(Formerly-Duke University)
1308 Arboretum Drive
Chapel Hill, N.C. 27514
Ethel Shanus, Ph.D.
222 Main Street, Apt. 301
Evanston, Ill. 60202
Ann R. Somers, D.Sc.
UMDNJ/Rutgers Medical School
31 Scott Lane
Princeton, N.J. 08540
Staff of the U.S. House of Representatives Special Committee on Aging
Staff of the U.S. Senate Select Committee on Aging
Julie Troccio
American Health Care Association
1200 Fifteenth Street, N.W.
Washington, D.C. 20005
Ann Wilder Zimmer, Ph.D.
Special Assistant to the Associate Director for Biomedical Research and Clinical Medicine
National Institute on Aging
National Institutes of Health
Building 32, Room 5C11
9000 Rockville Pike
Bethesda, Md. 20892

\section*{The National Center for Health Statistics Work Group on Surveys on the Aging}

\section*{Chair}

Mary Grace Kovar, Dr.P.H.
Special Assistant for Health Data Policy and Analysis
Vital and Health Statistics Systems

\section*{Work Group Members}
E. Earl Bryant

Formerly Associate Director
Office of Interview and Examination Statistics Program
Clinton E. Burnham
Formerly Chief, Survey Planning and Development Branch
Division of Health Interview Statistics
Thomas Drury, Ph.D.
Chief, Health Status Measurement Branch
Division of Epidemiology and Health Promotion
Jacob J. Feldman, Ph.D.
Associate Director
Office of Epidemiology and Analysis Program
Robert R. Fuchsberg
Formerly Director
Division of Health Interview Statistics
Peter L. Hurley
Associate Director
Vital and Health Statistics Systems

Jennifer Madans, Ph.D.
Deputy Director
Office of Epidemiology and Analysis Program
Stewart C. Rice
Chief, Survey Planning and Development Branch
Division of Health Interview Statistics
Isadore Seeman
Formerly staff member
Vital and Health Care Statistics Program
National Mortality Follow-back Survey
Monroe Sirkin, Ph.D.
Associate Director
Office of Research and Methodology
Owen Thomberry, Ph.D.
Director
Division of Health Interview Statistics
Joan Van Nostrand
Acting Director
Division of Health Care Statistics
Ronald W. Wilson
Director
Division of Epidemiology and Health Promotion

\section*{National Center for Health Statistics Division of Health Interview Statistics Staff for the 1984 Supplement on Aging}

Survey Planning and Development Branch staff responsible for the development and design of the 1984 Supplement on Aging questionnaire and data collection procedures were

Joseph E. Fitti, Group Leader
Amy Coyle
Marie L. Monsees

Illness and Disability Statistics Branch staff responsible for preparing the specifications for computer edits of the keyed data files were

Susan Jack, Group Leader
Gerry Hendershot, Ph.D.
Charlotte Schoenborn
Robyn Stone, Dr.P.H. (National Center for Health
Services Research)

Computer Systems and Programming Branch staff responsible for programming the computer edits and for preparing and documenting the data tapes were

\footnotetext{
Patricia Sartwell, Group Leader
Nancy Gagne
George Gerhold
Sue Hsiung
Vance Hudgins
Teresa Washington
}
U.S. Bureau of the Census

\section*{Demographic Survey Division \\ Staff for the 1984 Supplement on Aging}

Health Surveys Branch staff responsible for coordinating activities performed by the U.S. Bureau of the Census were

\section*{Robert Mangold, Chief}

\section*{Gemma Furno}

Catherine Hester

\title{
Vital and Health Statistics \\ series descriptions
}

SERIES 1. Programs and Collection Procedures-Reports describing the general programs of the National Center for Health Statistics and its offices and divisions and the data collection methods used. They also include definitions and other material necessary for understanding the data.
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Scientific and Technical Information Branch
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Public Health Service
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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Heaith Service
National Center for Health Statistics
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[^1]:    ${ }^{\text {a }}$ National Technical Information Service
    5285 Port Royal Road
    Springfield, Virginia 22161
    Tel: (703) 487-4650

