Plan and Operation of the National Employer Health Insurance Survey

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

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

CENTERS FOR DISEASE CONTROL AND PREVENTION

Suggested citation

Moss, AJ. Plan and Operation of the National Employer Health Insurance Survey. National Center for Health Statistics. 1999.

Library of Congress-in-Publication Data

Moss, Abigail J.
Plan and Operation of the National Employer Health Insurance Survey / [by Abigail J. Moss]
p. cm. — (DHHS publication ; no. (PHS) 99–1021)
Includes bibliographical references.
At head of title: Vital and health statistics
ISBN 0–8406–0553–6
1. Insurance, Health—United States—Statistical methods. 2. Insurance surveys—United States. 3. Health surveys—United States. I. Title. II. Title: Vital and health statistics. III. Series.
HG9396.M68 1999 99—25082
331.25'5—dc21 CIP

For sale by the U.S. Government Printing Office
Superintendent of Documents
Mail Stop: SSOP
Washington, DC 20402-9328
Printed on acid-free paper.

Plan and Operation of the National Employer Health Insurance Survey

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

Hyattsville, Maryland
April 1999

DHHS Publication No. (PHS) 99-1021

National Center for Health Statistics

Edward J. Sondik, Ph.D., *Director*

Jack R. Anderson, *Deputy Director*

Jack R. Anderson, *Acting Associate Director for International Statistics*

Lester R. Curtin, Ph.D., *Acting Associate Director for Research and Methodology*

Jennifer H. Madans, Ph.D., *Acting Associate Director for Analysis, Epidemiology, and Health Promotion*

P. Douglas Williams, *Acting Associate Director for Data Standards, Program Development, and Extramural Programs*

Edward L. Hunter, *Associate Director for Planning, Budget, and Legislation*

Jennifer H. Madans, Ph.D., *Acting Associate Director for Vital and Health Statistics Systems*

Stephen E. Nieberding, *Associate Director for Management*

Charles J. Rothwell, *Associate Director for Data Processing and Services*

Division of Health Care Statistics

Linda K. Demlo, Ph.D., *Director*

Thomas McLemore, *Deputy Director*

Gail S. Poe, M.P.H., *Special Assistant*

Contents

Acknowledgments

Major contributions to this report were provided by Westat, Inc. staff including: Sherman Edwards, David Marker, Samantha Sheridan, Bruce Allen, Jeanine Kirkner, Karen Molloy, Anne Denbow, Earl Bryant, Ibrahim Yansaneh, and Leslie Wallace. Valuable comments to earlier versions of this manuscript were provided by the National Center for Health Statistics National Employer Health Insurance Survey team members: Karen Allen, Esther Hing, Christopher Moriarity, Christina Park, and Gail Poe.

Abstract

The National Employer Health Insurance Survey, a State and national probability sample survey of private establishments and governments, was conducted in 1994. The survey was designed to produce State and national estimates of employer-sponsored health insurance. Topics covered included employee eligibility and enrollment, and characteristics of offered plans, such as plan types, premiums, and covered services. This report traces the development of the survey and describes the data collection procedures, instruments, and survey methodology, including data processing and estimation methods.

Keywords: National Employer Health Insurance Survey • survey methods • business establishments • State estimates.

Plan and Operation of the National Employer Health Insurance Survey

By Abigail J. Moss, Division of Health Care Statistics

Introduction

In April 1994 the National Center for Health Statistics (NCHS) launched the National Employer Health Insurance Survey (NEHIS) to collect and disseminate information about the availability and characteristics of employer-sponsored health insurance coverage, plan benefits, and costs.[1] Although NCHS had lead responsibility for conducting the survey and data dissemination, the Agency for Health Care Policy and Research (AHCPR) and the Health Care Financing Administration (HCFA) were full partners and cosponsors of the survey.[2]

NEHIS was a stratified random sample of businesses (individual establishment locations) and governments. Data collection was conducted between April and December of 1994 under contract by Westat, Inc., a research firm located in Rockville, Maryland. Most interviews were conducted via telephone using a computer-assisted telephone interviewing (CATI) system. About 39,000 public and private employers and self-employed individuals were interviewed. The large size of the NEHIS sample was driven by the need for national and State-level estimates.

NEHIS had four major objectives:

- Provide baseline data for evaluating the effects of health care reform at the State and national level.
- Describe the employment-based health insurance system as of 1993.
- tk;4Measure State and national levels of health insurance spending for the National Health Accounts.
- Provide data for prospective policy analysis of the effects of health care reform.

This report provides a description of the development of NEHIS including the survey design; the questionnaire content; and the methodologies employed in data collection, in data processing, and for data analysis. Current and future analysts and data users should find the topic areas and details covered in this report instructive when analyzing and utilizing the NEHIS data set.

Background

Employer-sponsored health insurance is a major source of private health care coverage in the United States. During the development of President Clinton's Health Security Act, it became apparent that a new information system was needed to answer many important questions relating to employer-sponsored health insurance. Therefore, in June 1993 a work group consisting of staff from NCHS, AHCPR, and HCFA was convened to develop plans for a new National Employer Health Insurance Survey. This group was formed in direct response to a request from the President's Task Force on Health Care Reform that estimates of health care spending by State be developed. Analysts from the Assistant Secretary for Planning and Evaluation, the Department of Treasury, the Small Business Administration, and the Substance Abuse and Mental Health Services Administration were also consultants to this group.

As Federal and State governments develop and implement reforms of the health care system, major changes are likely to occur in the extent and form of private health insurance coverage, benefits, and premium sharing. The estimates derived from NEHIS were intended to gain an understanding of geographic variations in spending for health care and the probable differential impacts that proposed health policy initiatives would have by State. In addition, estimates were needed to update the National Health Accounts, which serve as HCFA's source for describing the current economic resources of the Nation devoted to health care. National Health Accounts data are an essential component for projects of the HCFA's Office of National Cost Estimates for modeling health system reform costs and for health care costs projections. AHCPR also planned to use the NEHIS estimates to evaluate employer spending for health care and the differential impacts that proposed health policy initiatives would have on employers in each State in the areas of coverage, benefits, and premium sharing.

[1]NCHS has authority under Section 306(b) of the Public Health Service Act (42 USC 242k) to collect data on health insurance coverage plans offered by employers.

[2]Government project staff included the following (in alphabetical order): From NCHS—Karen Allen, Esther Hing, James Massey, Christopher Moriarity, Abigail Moss, Christina Park, Gail Poe, and Arlene Siller; from HCFA—Brad Braden, Katherine Levitt, and Pat McDonnell; and from AHCPR—Alan Monheit.

NEHIS was the first federally sponsored survey designed to produce State estimates of employer-sponsored health insurance. The survey methodology employed in NEHIS, however, drew extensively from two previous employer surveys: The Survey of Health Insurance Plans, sponsored by HCFA and conducted in the 1980's, and the 1993 Robert Wood Johnson Foundation 10 State Employer Health Insurance Survey. Other Federal and commercial employer surveys that have produced national estimates or estimates for certain selected types of employers or employees include the Employee Benefits Survey, conducted annually by the U.S. Bureau of Labor Statistics with support from HCFA; the 1989–92 Health Insurance Association of America Surveys of Employer-Sponsored Health Benefits; the Foster Higgins Health Care Benefits Surveys (conducted since 1986); and KPMG Peat Marwick's annual survey of large firms (200 workers or more) (1).[3]

In addition to providing State estimates, NEHIS was designed to fill gaps in employer-sponsored health insurance data previously unavailable from these data sources. For example, small employers and self-employed persons were not always included or adequately represented in existing data collection efforts. A few surveys did not collect information on establishments that did not offer health insurance. And some surveys collected plan benefits information in a way that produced estimates that were not representative of all plans. Small sample sizes and low response rates are other limitations found in some employer surveys. The NEHIS design sought to address each of these specific limitations as explained in subsequent sections of this report.

To provide the health care reform debates with current data, the contracting process and survey development were greatly expedited. The data collection and processing contract was awarded to Westat, Inc. in November 1993, a ''dress rehearsal'' was conducted in February 1994, and field work started in April 1994. Unfortunately, because of unanticipated complexities in almost every phase of the survey development and data processing, the goal of expedited data release was not achieved.

Sample design

NEHIS was a sample survey of business establishments (specific locations), governments, and self-employed individuals with no employees (SENE's). Many aspects of the NEHIS sample design resembled previous employer-based surveys, such as the Survey of Health Insurance Plans for national and regional estimates and the 1993 Robert Wood Johnson Foundation Employer Survey for State-level estimates in selected States. However, the NEHIS study objectives differed from these and other previous employer surveys in two major ways. First, NEHIS planned to obtain national estimates and estimates for the 50 States and the District of Columbia for the universe of employers from the private and public sectors. Second, data obtained on health insurance premium costs and other plan benefit information were to be representative of the universe of health insurance plans. These two survey features, in particular, had a major impact on the sample design employed for NEHIS. Details of the NEHIS sample design are also provided in several other publications (2,3).

Sample unit

For the private sector, the basic sample unit was the establishment, defined as ''an economic unit, generally at a single physical location, where business is conducted or services or industrial operations are performed (4).'' Churches and charity organizations with paid employees were considered establishments. The major reason that establishments were sampled in NEHIS rather than firms (i.e., a business organization or entity consisting of one domestic establishment or more under common ownership or control) is that establishments are confined within State borders. This sampling unit facilitated estimates by State because each establishment could be identified with a single State.[4] For the public sector, the sample unit was the government entity, i.e., Federal, State, county, municipality/township, school district, and special district. Exceptions were some government units that jointly purchased health insurance for their employees through a purchasing unit. For those government entities belonging to a specific purchasing unit, the single purchasing unit became the sample unit for the public sector sampling frame.[5]

Sampling frames

Three sample frames were used in NEHIS to ensure coverage of all types of employers. The largest frame was the Dun's Market Identifiers (DMI) file, available from Dun and Bradstreet, which was used to sample most private establishments. Although the DMI

[3]For a comparison of employer health insurance estimates from NEHIS and other sources, see *Comparability of 1994 National Employer Health Insurance Survey Estimates With Other Employer Surveys* (1) and *Effect of Methodological Differences on Estimates from Two Employer Surveys* (13).

[4]Using the establishment as the sampling unit precludes NEHIS from producing firm-level estimates; for example, the percent of ''firms'' that provide health insurance benefits to employees. However, firm size can be used as a classification variable to describe the establishment; for example, the percent of establishments in firms of 1,000 employees or more that provide health insurance benefits to employees.

[5]Because some purchasing units cover State government and local government employees, NEHIS' health insurance data cannot be presented separately for the State government and for local governments in all States.

file attempts to cover all U.S. establishments, public and private, a concern existed about the likely deficiencies in coverage of governments and SENE's. Therefore, two other frames, also described below, were employed for NEHIS in sampling these employers.

Private sector

The sample frame for private sector employers was the October 1993 DMI file.[6,7] The DMI file was used as the private sector sampling frame for NEHIS because it was publicly available. NEHIS did not use government sources of private establishment lists, including those maintained by the U.S. Bureau of the Census, the U.S. Bureau of Labor Statistics, and the Internal Revenue Service because of limitations imposed by confidentiality restrictions (5). Although no comprehensive evaluation of the DMI file was conducted, several shortcomings were discovered with its use. For example, the DMI file generated a high proportion of ''out-of-scope'' business establishments, or about 8 percent of the NEHIS fielded private sector sample. These cases were mostly ''out-of-business'' establishments. Also, businesses listed on the DMI file can request to be ''delisted,'' and the NEHIS project staff found some evidence that this had occurred.

Self-employed individuals with no employees

NEHIS used the 1993 National Health Interview Survey (NHIS)[8] Person Record Quarters 3 and 4 files as the sampling frame for SENE's to address the concern that the DMI file underrepresented those individuals.[9,10] However, because the National Health Interview Survey does not differentiate between self-employed employees with and without other employees, this determination was made at the onset of the SENE interview, and only self-employed individuals with no other employees were considered to be in scope and eligible for the SENE component.

Public sector

The sample frame for local governments was the 1992 Census of Governments file maintained by the U.S. Bureau of the Census. This frame also included a small number of records added from the Higher Education Directory. Local governments include municipalities (including townships), counties, school districts, and special districts. In cases where local governments were known to provide health insurance through purchasing units, the purchasing unit replaced the individual units of government. (Attempts were made to identify only the large purchasing units.) Thus, the public sector sample frame consisted of one record for each local government not known to belong to a purchasing unit, and one record for each purchasing unit. Federal and State governments were not sampled, but were included with certainty.

Sample allocation and stratification

The primary goal of the NEHIS sample allocation and stratification design was to support reliable State-level estimates of characteristics related to employers—such as, the percent of businesses and governments that offer health insurance to their employees, and characteristics related to employees—for example, the percent of employees that work in businesses and governments that offer health insurance benefits. The basic allocation procedure first allocated the national sample to the States, next to sector within State, and then to individual strata within State-sector. The following discussion describes the private and public sector sample allocation and stratification procedures, exclusive of Federal and State governments, because these cases were all selected with certainty. Further details regarding the SENE sample are provided at the end of this section.

Allocation

Three State allocation models were considered for NEHIS. Allocation 1 was equal allocation for every State, allocation 2 involved allocation in proportion to the total number of employees in each State, and allocation 3 was allocation in proportion to the 0.3 power of the total number of employees in each State. The model adopted for NEHIS was allocation 3, representing a compromise that balanced the requirement for State estimates against the need for precision in the national estimates. This model most effectively accounted for the highly skewed distribution of employee counts by State, producing larger samples for the large States but a sample of at least 450 interviews for the small States. Specifically, the private and public sector sample sizes allocated to States ranged from about 450 completed cases in Montana—the State with the fewest

[6]A national census of employment establishments maintained from a variety of public sources by Dun and Bradstreet.

[7]Government entities listed on the Dun's Market Identifiers file were excluded as they were obtained from the Census of Governments frame.

[8]The National Health Interview Survey is a population-based household survey of the U.S. noninstitutional population, conducted by the U.S. Bureau of the Census for the National Center for Health Statistics.

[9]SENE cases originating from the Dun's Market Identifiers sample frame identified during NEHIS data collection were subsequently treated as ''ineligible'' and excluded since estimates for this population group were derived from the National Health Interview Survey frame. Similarly, the SENE interview included questions to identify and screen out self-employed persons with other employees, so as not to overlap with the Dun's Market Identifiers sample frame.

[10]State estimates of SENE's are not available from NEHIS, given the national sample design of the National Health Interview Survey.

employees—to over 1,400 completed cases in California—the State with the largest number of employees.

Sample allocation between the private sector and local governments within States was also based on number of employees, with local government employees being assigned 0.66 of the weight given to private sector employees. This allocation strategy was based on the assumption that local governments are likely to be more homogeneous than private employers with respect to the insurance plans made available to them and other characteristics, such as percentage of employees covered.

Stratification

Stratification within States was undertaken for two reasons: To ensure that the sample was adequately allocated to population segments corresponding to the NEHIS analytic objectives, and to accomplish the broader goals of increasing the efficiency of the NEHIS design.

Stratification in the private and public sectors was somewhat similar. Both sectors used State as a major stratifier (the District of Columbia was treated as a ''State equivalent''), and then, within State, corresponding sampling units were classified into strata defined by a two-way cross classification.

Private sector establishments were stratified by firm size and establishment size.[11] Three firm-size groups were used: Fewer than 50, 50–999, and 1,000 employees or more. Firm size was derived from the employee numbers and corporate linkage information on the DMI file. For most businesses, firm was defined as the entire parent company or enterprise. However, for multiestablishment firms[12] of 50 employees or more, first- and second-level subsidiaries were split from the parent company and treated as separate firms.[13] Establishments that were not part of a multiestablishment firm were assigned to a firm-size stratum based on the number of employees at that establishment.

Eight initial establishment size categories were used: One employee and no other[14] (kept as a separate stratum because of the potential for overlap with SENE's), 1–5,[15] 6–24, 25–49, 50–249, 250–999, and 1,000 employees or more, and ''unknown'' (representing about 12 percent of the frame total). Before sample selection, within each firm-size category ''unknown'' was combined with the establishment size category with the largest number of establishments. Also, some strata with a small number of sampling units were combined with similar strata in the same State.

Local governments were stratified by size (number of employees) and type of government (municipality, county, school district, and special district). Government employee counts were not available from the 1992 Census of Government file when the NEHIS sample was being developed. Consequently, an approximate measure of government size was determined by first matching the 1992 Census of Governments list to the 1987 Census of Governments file and then using size as reported on the 1987 file for matched government cases. This approach was based on ancillary information obtained from the U.S. Bureau of the Census indicating that, except for special districts, governmental units between these Censuses were relatively stable in size.

Employee size categories included: None, 1–5, 6–49, 50–249, 250–999, 1,000–4,999, 5,000–9,999, and 10,000 employees or more, and ''unknown.'' Before selection of the sample, ''unknowns'' were assigned to the modal employee size category for that type of government. Also, ''none'' (except for special districts) was collapsed into size stratum 1–5 on the supposition that the entity in 1992 would have few employees if it had no employees in 1987. Purchasing units were assigned to a government stratum based on the type of government employing the greatest number of employees in that purchasing unit.

The SENE sample was not stratified because all adults identified as mainly ''self- employed'' on the selected National Health Interview Survey data files were included as sample cases for NEHIS.

Sample selection

Establishments

The number of NEHIS sampled cases from the private and public sectors was initially expected to yield about 51,000 completed interviews. Cost reduction and other considerations, however, resulted in a reduced sample with an expected number of about 41,000 completed interviews, comprised of about 38,000 private sector establishments (including about 1,000 SENE

[11]The possibility of stratifying by major Standard Industrial Classification (SIC) code was considered but ruled out because of the concern that the cross strata by size and SIC code would have too few cases. Instead, establishments in the detailed strata were sorted by 11 SIC code categories before sample selection. This approach ensured proportional representation of all major SIC groups, without actually stratifying by SIC code.

[12]Multiestablishment firms (MEF's) were defined differently at various stages of NEHIS. For stratification purposes, when two establishments or more on the frame were part of the same firm, they were considered to be part of a multiestablishment firm. During data collection, however, an establishment was considered to be part of a multiestablishment firm only when there were two sampled establishments or more from that firm. For analytic purposes, however, all surveyed establishments with two business locations or more were classified as MEF's.

[13]For stratification purposes, a firm was identified according to that level of the total organization presumed likely to make health insurance policy decisions.

[14]One employee establishments that were not linked to any other establishments on the frame. Single employee establishments from the Dun's Market Identifers sample frame were initially retained so as not to exclude potentially eligible establishments that were misclassified by establishment size.

[15]If only a one employee establishment, the establishment would be linked to other establishments on the frame.

interviews) and about 3,000 government cases.

Private establishment and local government cases were selected using Westat, Inc.'s proprietary software WESSAMP. All Federal and State government agencies were included for the NEHIS sample.[16] Both types of cases (i.e., private establishments and governments) were selected systematically with equal probability within strata.[17] Sampling rates were calculated in each stratum as the target sample size divided by the number of establishments on the frame. The fielded NEHIS sample consisted of a total of 80,845 private sector establishments (excluding SENE's) and 4,420 governments and purchasing units.

The SENE sample consisted of all self-employed adults aged 18 years or older from quarters 3 and 4 of the 1993 National Health Interview Survey with no further sampling for these cases. Of the sampled 3,543 self-employed individuals, only 919 persons were actually identified in NEHIS as SENE's. Of the remaining cases, 1,897 persons were ineligible and 727 cases were nonrespondents of unknown eligibility. The primary reason for ineligibility was that during the NEHIS interview, the self-employed individual reported having other employees. It is not surprising that the survey sample included many ineligible cases because NHIS does not differentiate between self-employed individuals with and without employees.

Plan subsampling

Another feature of the NEHIS design included the subsampling of health insurance plans if more than five plans were offered at the sample establishment. When five plans or fewer were offered, data were collected on all plans. Subsampling of plans was done to reduce response burden of NEHIS respondents in business establishments and local governments with many health insurance plans.

For purposes of plan subsampling, plans were classified into four groups: Firm-wide major plans, firm-wide single service or special plans, local major plans, and local single service or special plans. Major plans typically cover inpatient hospital stays and outpatient physician services (e.g., health maintenance organizations, preferred provider organizations, point-of-service plans, and indemnity/fee-for-service plans). Single-service or special plans provide for one particular type of coverage, such as, dental, prescription drug, and vision benefits (appendix I).

Typically, for businesses offering six health plans or more to their employees, five plans were subsampled in a way that major health plans and single-service health plans had balanced representation in the sample. However, for those businesses with numerous sampled establishment locations, a separate subsampling plan was developed that limited data collection to no more than 13 plans from all sampled establishments within the firm. For those cases plans were subsampled such that no more than five plans were selected from any one establishment.

Subsampling of plans was implemented for about 11 percent of private sector establishments with insurance and for about 9 percent of local governments (and purchasing units) with insurance. The Federal Government and nearly all State governments reported on all of the plans available to their employees. Plan subsampling was not implemented for the Federal and State governments because it was assumed that these entities would willingly participate.[18] Also, no plan subsampling existed for SENE's, who were expected to have fewer than five health plans each.

Questionnaire design

The ambitious analytic objectives and the unique design features of NEHIS led to the development of a large and complex survey questionnaire. The special features having the greatest impact on the main NEHIS questionnaire design included interview versatility, multiple respondents, plan subsampling, and multiple retrospective reference periods.

Interview versatility

The NEHIS data collection procedures and instruments were different for governments, business establishments with only one location, businesses with one sampled establishment, and businesses with more than one sampled establishment as well as for SENE's—self-employed individuals with no other employees and only one location.

In the simplest case (single location businesses), the survey collected information about the sampled etablishment and plan information for each plan (up to five plans) offered at that establishment. In cases where the sampled establishment belonged to a firm (and in the most complex cases where there were multiple sampled establishments within the firm), in addition to collecting information about the sampled establishment(s) and plan information pertaining to those establishments, information about the firm also was obtained. These data requirements not only involved designing a questionnaire that had the components necessary

[16]The Government of the District of Columbia and the State Governments of Maryland and Virginia chose not to participate in NEHIS.

[17]In the private sector, the first stage of sampling included the selection of a reserve sample. A subsequent sampling step selected NEHIS private sector cases. Because of variability in reserve sampling rates, NEHIS sample cases were not selected with equal probability within strata for a small fraction of the sampling strata.

[18]For the responding State governments where data were not collected for all plans (Alaska, California, Wisconsin, and Washington), plan weights were adjusted to account for nonresponse.

to collect several different levels of information—establishment versus firm—but also allowed for interviewing different respondents at the sampled establishment and at the firm's headquarters.

The NEHIS data base also contained two distinct types of variables: Establishment-based items, such as the number of employees at the establishment eligible for health benefits; and plan-based items, such as the amount of the premium paid by an employee for a specific plan offered at an establishment. Where and how this information was obtained, however, varied according to the number of sampled establishments within a firm, the number of plans offered, and the administration of health benefits for the establishment. For example, the NEHIS questionnaire design needed to allow for the possible collection of plan information for multiple sampled establishments from a central source rather than at each establishment where the plan was offered. This particular approach was most frequently used when interviewing large businesses and large multiestablishment firms (MEF's) where health benefits are administered centrally and the same plans are offered at more than one location.

Multiple respondents

The primary reason for designing a questionnaire for more than one respondent was to enable the interviewing of the most knowledgeable respondent for different sections of the NEHIS interview. This usually occurred in business establishments with health benefits managers and/or where separate accounting or personnel offices maintained records regarding employee health benefits, employee records, company payroll, and expenditures. Although this approach often increased the number of callbacks and time required to complete the interviews, it probably also reduced the number of items with ''don't know'' responses and answers given that were based on estimates rather than derived from records or other documents maintained by the business establishment.

Plan subsampling

Another survey design feature that impacted on the NEHIS questionnaire was the use of plan subsampling. Plan subsampling affected the questionnaire design in various ways. For example, a complete plan enumeration component was initially required for the plan selection procedure. Questions about total plan enrollments and costs for all plans offered also had to be asked for those establishments with plan subsampling to produce total health insurance plan estimates for individual establishments.

Reference period

The collection of health insurance financial information, particularly annual premium costs and benefits paid, was pivotal in deciding which reference period to use for the NEHIS questions. The approach adopted for NEHIS was to obtain health insurance costs for a plan year that ended before the interview date, enabling collection of actual health benefits expenditures rather than actuarial projections.[19] Because it was preferable that all NEHIS data cover roughly the same period, a retrospective period therefore was used for most NEHIS questions.

- December 31, 1993, and the ending date of the 1993 plan year (if different), were the reference period dates for point-in-time estimates.
- The 1993 plan year was the reference period date for annual plan level information, such as total cost per plan.

Specifically, to determine whether a business establishment offered health benefits to their employees and obtain other establishment level estimates, such as counts of employees, eligibles, and enrollees, the NEHIS interview used the retrospective point-in-time reference date of December 31, 1993. For plan-specific information, such as plan enrollment counts, the point-in-time reference period used was the ending date of the 1993 plan year.

In fact, the two NEHIS point-in-time reference dates—December 31, 1993, and date of end of 1993 plan year—used to derive different types of NEHIS estimates were the same for about 60 percent of the interviews conducted. This occurred whenever the health insurance plan year reported for these interviews was the calendar year; thus, the end of plan year date for those health insurance plan questions was also December 31, 1993.

Using two retrospective point-in-time reference periods created some anomalous situations for NEHIS. The end of plan year reference date itself also was problematic for some cases. For example, some establishments started offering health benefits in 1993, but their 1993 plan year ended after the date of interview. Such establishments therefore ''offered'' health insurance to their employees as of December 31, 1993, although the NEHIS plan data base file contains no plan information for these cases, because their plan year ended on or after April 1, 1994.[20] There were also establishments that stopped offering health benefits in 1993. Thus, they did not ''offer'' health insurance according to NEHIS ''as of December 31, 1993'' definition, although their last plan year met the criteria for inclusion and plan information for these establishments was obtained. **Table A** shows the distribution of NEHIS interviewed cases by whether health insurance was

[19]Plan year 1993 was defined for NEHIS as ending between April 1, 1993, and March 31, 1994.

[20]See footnote 19.

Table A. Completed interviews by whether health insurance offered on December 31, 1993, and/or plan year 1993

Health insurance plan year 1993 status	Health insurance coverage offered (12/31/93)	Health insurance coverage not offered (12/31/93)	Total
Health insurance offered in plan year 1993	26,675	118	26,793
Health insurance not offered in plan year 1993	102	10,923	11,025
Total	26,777	11,041	37,818

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey. 1994.

offered on December 31, 1993, and by whether the 1993 health insurance plan year date for reported plans coincided with this same reference period date.

As noted previously, having two reference periods created several difficulties and added to the complexity of data collection and data analysis. Therefore, the use of one reference period is recommended for future surveys. A retrospective reference period also sometimes deterred data collection efforts (e.g., old records or plan brochures were not readily or no longer available). The various issues relating to the benefits/limitations of a retrospective versus a current reference period also should be carefully considered in determining which to use.

Questionnaire documents

Most NEHIS interviews were conducted using a computer-assisted telephone interview (CATI) questionnaire. The CATI methodology was implemented for several reasons: Complexity of the question sequence, expected use of multiple respondents, the large number of sampled cases, limited subject-matter expertise of interviewers, and need for rapid data turnaround. However, the NEHIS CATI instrument proved to be problematic for the largest MEF cases and for the Federal Government. Therefore, while these interviews were still conducted via telephone, a great deal of information initially was collected off line from CATI and entered later into the CATI system, usually by the interviewer assigned to the case. In fact, future surveys should strive to streamline this questionnaire document. A paper questionnaire was used exclusively for SENE telephone interviews. This format was chosen because the relatively straightforward questions asked for the small sample of SENE cases did not warrant the development of a separate CATI instrument.

The CATI system was selected as the best data collection mode for NEHIS because of its potential to produce higher quality data with a shorter turnaround. Although the CATI system allowed the NEHIS data collection to be completed in a fast and efficient manner, the back-end production of data files could not be accomplished in a short turnaround because of the multiple forms and ways the data were (permitted) to be entered in the CATI system, which made post-CATI editing very difficult.[21] Furthermore, it is unclear whether the resulting data are of higher quality than those collected by different modes. As was evidenced by the problematic usage of CATI by very large companies, telephone interviews may not be the best data collection mode in all cases. More research is needed to determine the optimal mix of self-administered mail, telephone, and personal visit interviewing (or ''data collection'').

[21]It should be noted that the complexity of the CATI instrument per se, was not the main reason for the extensive processing time. Rather, integrating information reported on ''Comments'' and ''Problem'' sheets and inconsistent data supplied by respondents were major contributors to the delay. Inadequate on-line CATI edits also contributed to the problem.

Computer-assisted telephone interview questionnaire

Content

A paper copy of the NEHIS CATI questionnaire is not readily reproducible because it comprises hundreds of pages of CATI screens.[22] However, the NEHIS self-administered questionnaire, appendix II, includes all of the analytically relevant CATI data items. In addition, appendix III contains a detailed listing of the NEHIS analytic data items.

Selected features

The CATI instrument contained a number of features to improve overall response and data quality and to address situations unique to interviewing business establishments. First and foremost, maximum interviewer flexibility was needed for conducting interviews at business establishments. Interviews had to be scheduled ''at the respondent's convenience'' and often involved scheduled callbacks on specific dates and times. This was accomplished with a callback scheduler system whereby calls were automatically placed at specified times and routed to the next available interviewer. Interviews conducted in the workplace also were subject to abrupt interruptions and interview postponements.

[22]CATI screens are individual computer monitor displays. Most screens corresponded to a single question the interviewer asked; however, they also contained interviewer instructions, transitional statements, and overlays which usually were follow-up questions to an answer given to a previous question.

The CATI system contained an easily accessible jump off mechanism whereby interviewers could stop the interview with little advance notice. And often times, it was necessary to contact several respondents to interview the most knowledgeable person for various questionnaire sections. The CATI design could accommodate numerous potential respondents per case. The NEHIS questionnaire also contained numerous and intricate skip patterns. Because the CATI system automatically selected the appropriate questions, interviewer errors resulting from following incorrect skip patterns were minimized. Interviewer keying errors and respondent reporting errors were further reduced because of built-in CATI edits and aids. These and other CATI questionnaire features are described in more detail in the following sections.

Question sequence

The overall organization of the CATI questionnaire consisted of about 15 different question segments, each containing a set of related questions with an expected administration time of less than 5 minutes. These questionnaire sections enabled interviewers the flexibility to conduct the interview in partial segments, if necessary, to accommodate respondents' work schedules and interview multiple respondents. Gate screens provided at the beginning of most questionnaire sections and the questionnaire management screen were the CATI vehicles interviewers used to continue with the same respondent, change to another respondent, skip to another section, suspend the interview, or resume an interrupted interview. Questionnaire routing was also determined by the responses given to certain key questions. A number of operational constructed variables was created in CATI to facilitate this process. Sometimes, these operational constructed variables were further edited to become analytic variables.[23]

The guiding principle for MEF interviews was that all sampled establishments linked to the same MEF were interviewed as one case. Therefore, the CATI questionnaire for MEF cases incorporated several more loops of questions than the single (sampled) establishment firm (SEF)[24] CATI version. Because health benefits for establishments in a MEF are often administered at the corporate or subsidiary level, these interviews were first conducted at that level to obtain as much information as possible about the firm, the sampled establishments and plans offered, before interviewing (if necessary) respondents at regional headquarters or the individual sampled establishments. Unfortunately, NEHIS data were not always collected at the level required for analysis for a variety of reasons.

Although the CATI instrument anticipated some of these reporting level problems, others were dealt with as they occurred. For example, it was anticipated that plan costs would not always be available for a sampled establishment wherein it could be reported for the firm. When this occurred, an attempt was made to obtain the information necessary to compute per employee plan costs at whatever level respondents were able to report. Estimated plan costs could then be derived for an establishment by multiplying the number of employees enrolled at the establishment by this cost per employee estimate. Most of the NEHIS respondents who said that they could not report plan costs at the establishment level were able to report plan enrollments and plan costs together for another organizational level, so a per employee cost could be derived. But this type of ratio-adjusted estimate could only be computed when establishment level enrollment figures were also known. This example illustrates just one of a number of different procedures that were attempted to maximize the information respondents were able to report in NEHIS. Despite various approaches, obtaining establishment level costs and enrollments across plans proved to be quite problematic in NEHIS for multilocation firms.

Computer-assisted telephone interview questionaire edits

The NEHIS CATI system used three types of edits: Hard edits, soft edits, and consistency edits. Hard edits set absolute limits on the code value that could be entered. These were used mostly to catch interviewer keying errors of impossible codes such as percentages over 100 and unassigned code numbers. Numerous soft edits and consistency edits also were included. Soft edits were defined by the expected ranges the values could take. When soft edits were violated, the CATI system displayed a message indicating an unlikely value, and the interviewer was required to reenter an answer. If an out-of-range entry was made a second time, the system accepted the response but set an edit flag to denote the problem. Consistency edits compared responses to two data items or more; for example, if the number of full-time employees exceeded the total number of employees, the CATI system displayed an error message prompting the interviewer to resolve the discrepancy. Unresolved discrepancies were allowed and flagged.

Although the NEHIS CATI program included more than 2,000 edits, additional edits on key variables, particularly for plan costs and employee and enrollment counts for the establishment would have

[23]When such additional edits occurred, the variable name carried a numeral suffix. For example, INSURE was edited to become an analytic variable INSURE2, and PLANTYPE was further edited to become PLANTYP2, and then PLANTYP3.

[24]SEF cases included businesses with only one location and businesses with more than one location that had only one location sampled for NEHIS.

been extremely beneficial. Some of these kinds of complicated but useful edits were not implemented because of data collection time constraints and issues relating to how interviewers presented such discrepancies to respondents. For additional details about the NEHIS CATI edits, see *Volume II: Instruments, Chapter 4, NEHIS Methods Report* (6).

Self-administered questionnaire

In addition to the CATI instrument, a self-administered paper version of the CATI questionnaire was also developed for the few employers specifically requesting a mail questionnaire. Although this document is a greatly condensed version of the CATI document, it contains most of the analytically relevant data items that are on the CATI questionnaire (appendix II).

Nonresponse questionnaire

Another data collection document developed for NEHIS was a nonresponse questionnaire, implemented as a last resort for some respondents that refused to participate in CATI or complete the self-administered questionnaire. It contained eight questions to determine the establishment's eligibility for NEHIS, classify the establishment according to whether health insurance was offered, and if so, obtain brief descriptive information about the employer's health insurance plans (appendix IV).

This document was used for two types of situations: For all SEF, MEF, and local government refusal cases failing all conversion attempts, but where someone contacted at the business establishment was willing to answer a few basic questions; and for SEF noninterview cases that received a result code of ″maximum call attempts'' (i.e., 14 callbacks without reaching a respondent to do the NEHIS interview). As a result of this procedure, about 700 additional establishments were added to the NEHIS data base because they met the minimum reporting requirements for establishments not offering health insurance. In addition, those cases found to be ineligible were reassigned to that specific final result code category. It is recommended that future surveys consider a more extensive use of a nonresponse questionnaire on the full survey sample for reducing nonresponse. However, potential bias from using this procedure should be considered. If cost constraints or other survey limits preclude its use for the full sample, a random sample of nonrespondents is recommended to measure more fully the characteristics of nonresponders.

Questionnaire for self-employed individuals with no employees

As previously mentioned, a paper questionnaire was used in interviewing SENE cases. Most of the SENE items mirrored the CATI instrument; however, many CATI questions were not applicable for self-employed individuals (appendix V).

Briefly, the SENE questionnaire included the following data items:

- Confirmation that the sample person was self-employed without employees on December 31, 1993.
- Descriptive information about the self-employed business—type of business, incorporated status, age of business, for profit or nonprofit business, net profits/losses in 1993.
- Whether the sample person was covered by health insurance of any kind, and if so, an enumeration of the plan(s).
- Source of the health insurance coverage-public source, direct purchase from insurance company, through SENE's business, SENE's or spouse's current/former employer, union/association plan, or other source.

Information on each major health plan reported[25] included:

- Type of plan.
- Who was covered.
- The premium amount and amount of any employer contribution.
- Deductibles, copayments, lifetime maximum benefit, waiting periods, and whether any family member was excluded from coverage.
- Types of covered services.

Although some aspects of the SENE interview were quite successful, others were less so. In general, self-employed individuals were willing and able to describe their employment situation and nonfinancial details of their business. They were also willing to report the presence and source of health insurance coverage and able to describe the major features of that coverage. However, in general, SENE respondents were less informed about their coverage than other respondents in the private and public sectors. The highest nonresponse items were the cost variables: Premiums, deductibles and copayments. This was especially true in cases where the SENE's insurance source was the spouse's employer. For more specific information regarding the SENE interview results, see *Health Insurance Coverage of the Self-Employed With No Employees: Estimates from the National Employer Health Insurance Survey, United States, 1993* (7).

Preliminary survey activities

Dress rehearsal pretest

A dress rehearsal of NEHIS was conducted during a 2-week period in February 1994. Twenty-five experienced interviewers were trained over 4 days, followed by 5

[25]Major health plans typically cover inpatient hospital stays and outpatient physician services. See also appendix I.

days of telephone interviewing and 2 days of interviewer debriefing meetings. The purpose of this pretest effort was to test and finalize the NEHIS CATI questionnaire and data collection methodology that would be used in the main study, including interviewer training, manuals, and various other documents and procedures.

The pretest sample contained 200 local government entities and 1,166 single location businesses. The goal of completing about 50 government and 200 private sector interviews was accomplished. A systematic sample of local governments[26] and business establishments from 10 States—Alabama, Maine, Maryland, Massachusetts, Mississippi, Nevada, Ohio, South Dakota, Tennessee, and Wisconsin—was drawn, yielding about 400 cases from each of three establishment size categories: Fewer than 5 employees, 5–24 employees, and 25 employees or more. Establishments with more than one location were purposely not included in the dress rehearsal sample for several reasons: The brief duration of the pretest made it problematic to complete these cases, greater potential overlap of these cases with the main survey, and not having a finalized MEF CATI instrument at the time of the scheduled pretest.

Although the pretest protocol was not conducive to producing final response rates, an approximation of projected response rates of all completed pretest cases ranged from 77 to 82 percent, using several calculation methods.

During the dress rehearsal effort, the CATI system worked generally well in areas of case management, appropriate question flow, and recording of interview information. Also, the interviewer training protocol and materials were generally found to be effective, although the actual interviewer training period was extended for the main study. Nevertheless, interviewers and other pretest participants produced a long list of recommended changes to the dress rehearsal questionnaire to improve clarity of questions, interview and work flow, and handle unforeseen responses. Many of those suggestions were, in fact, implemented for the main study. The overall conclusion reached from the dress rehearsal experience was that not enough time was allocated for this activity. The main NEHIS data collection effort would have greatly benefited from more extensive pretesting and in-depth pilot testing of problematic questions previously used in other employer surveys, as well as with newly drafted NEHIS questionnaire items. A separate report detailing the NEHIS pretest activity and results is available (8).

Prescreening

One recommendation from the dress rehearsal experience was to prescreen all sampled establishments in the main study. The prescreening activity consisted of an initial telephone call to the NEHIS sampled business to determine the following: The establishment reached was the sampled establishment, the business was still in existence, and the name of the primary respondent to send an advance letter. Several advantages were seen in making this preliminary telephone contact. It simplified the work flow of cases for the main study as sampled establishments not located during prescreening could be traced to determine their current status or location before going into the actual data collection case pool. It provided new interviewers with a simple task giving them an opportunity to develop confidence in the CATI methodology before having to navigate through the more complex NEHIS CATI questionnaire. It obtained more accurate address information for mailing the advance letter to the most likely respondent. And, it afforded additional developmental time to complete work on extensive revisions to the CATI instrument dictated by the dress rehearsal findings.

Over 250 Westat, Inc. interviewers were trained and participated in the NEHIS SEF prescreening activity in April 1994 with the following final results:

SEF prescreened cases	
37,757	verified establishments
17,644	cases identified for NEHIS tracing
2,927	ineligible establishments
1,371	preliminary refusals (These cases were recontacted during data collection.)

MEF prescreening was handled as a separate field activity by a smaller, more experienced staff of interviewers. Prescreening consisted of calling MEF headquarters to determine the correct name of the firm, how health benefits were organized, whether sampled establishments assigned to the MEF actually belonged, and the name of the primary respondent for the main MEF data collection interview. A total of 4,561 potential MEF's were prescreened between March and May 1994. About 80 percent of establishments belonging to those MEF's were confirmed as still in the MEF, 12 percent were ineligible, and 8 percent were reclassified as SEF establishments for NEHIS purposes.

Prescreening calls were also made to all governments classified as a purchasing unit to confirm identification of the purchasing unit and to obtain a current listing of government entities or member organizations belonging to the purchasing unit, including their size. The SEF and MEF NEHIS prescreening activity was seen as a very successful data collection methodology for a variety of reasons and one that should be undertaken for similar types of employer-based surveys.

[26]Local government cases came from the Robert Wood Johnson Foundation public sector unused sample cases that did not belong to a purchasing unit.

Tracing

The NEHIS tracing operation attempted to obtain working telephone numbers for sampled business establishments and governments. Because tracing could be an iterative process, a printed set of tracing materials was used for each traced case instead of CATI screens.

Initially, sample cases without telephone numbers were sent to tracing before prescreening. About 14 percent of the Dun's Market Identifiers file cases and all of the government cases did not have a complete telephone number. The tracing methods included the following:

- TELEMATCH—A telephone number lookup service that used computerized yellow page listings to find matches by business name, Zip code, and address (used for private sector cases only)
- Directory assistance—A service provided by the telephone companies

The tracing activity became an integral part of the entire NEHIS data collection activity. During prescreening, cases were diverted to tracing when it was determined that the telephone number was a nonworking number, the respondent had no knowledge of the sampled establishment, or after six unsuccessful call attempts were made. Cases from the main data collection were also sent to tracing when, for example, the telephone number became a nonworking number.

Of the 19,933 cases sent to tracing before or during prescreening, 84 percent were sent because the telephone number was missing, was a nonworking number, or produced a "questionable ring." Another 2,400 cases were sent to tracing during SEF data collection; only a handful of MEF cases were sent to tracing during data collection. Of all private sector cases that were traced, just over one-half yielded a working telephone. Over 95 percent of all government cases and all of the MEF cases were successfully traced.

Dead-end cases

To learn more about the probable eligibility status of DMI file cases that could not be found using the NEHIS tracing procedures, a sample of 50 of these "dead-end" cases from Maryland were selected for additional comprehensive tracing efforts. Westat, Inc. and government personnel made in-person site visits and inquiries of local officials, followed up other likely information sources, and examined documents, such as telephone yellow page listings to determine the locations and current status of these businesses. However, only 3 of the 50 business establishments in Maryland (6 percent) were actually located. And because those three businesses were not subsequently interviewed, the eligibility of the located cases was not confirmed. It was likely that had they been interviewed in NEHIS, some would have been determined ineligible for the survey. Given these results, the subjective decision reached was that about one-half of the businesses found would have been eligible for NEHIS.

Based on this experience, most of the cases not located through NEHIS standard procedures in all probability no longer existed or were otherwise ineligible. Therefore, it was agreed that when calculating the overall NEHIS response rates for the main study, a 3-percent adjustment factor—or one-half of the 6 percent of dead-end cases that were located—would be used for all cases that could not be located, in recognition of the NEHIS cases that could not be located but probably existed and were eligible for the survey.

Advance letters

As previously mentioned, a prenotification or advance letter was mailed to potential NEHIS respondents before the CATI interview **(appendix VI)**. When an individual's name was not obtained during the prescreening procedure, the advance letter was addressed to "Benefits Manager." This letter provided employers with an explanation of the purpose of the survey, its sponsorship, and why their participation was needed. The letter also contained the names of several business organizations that had endorsed the survey, a description of some of the specific kinds of information that would be collected, and suggestions of possible sources for the information being requested. In addition, MEF cases were sent a list of the specific establishments in that MEF that were selected for the survey.

The NEHIS interview began by interviewers asking respondents whether they had received the letter. Respondents who did not remember receiving the letter and requested seeing one were faxed or mailed another copy before the interview proceeded. However, most of these respondents agreed to having the letter read to them over the telephone.

A possible improvement for future surveys would be to include in the advance letter a more complete list of information to be included in the survey. A number of respondents commented that they would have been better prepared for the interview if they had known the full range of information to be requested.

Main data collection

Schedule

Data collection for the SEF cases began in late April 1994 and interviewing for the MEF and government samples started about 2 months later. Although the SEF and most government field work was completed by mid-December, a significant number of MEF cases were still being interviewed. However, data collection for MEF cases was discontinued at the end of

the year because of cost and time constraints. For obvious reasons, most NEHIS interviews were conducted during week days between 9 a.m. and 5 p.m. although evening and weekend calls were made when necessary. SENE interviewing, conducted primarily during evening hours and on weekends, was conducted from mid-August through the end of September 1994.

Interviewer training and quality control

SEF interviewer training included 3 days of classroom participation with lectures, demonstrations, written exercises, and hands-on CATI practice. A fourth day of training consisted of scripted role playing and closely supervised calls to sampled cases. Newly hired interviewers without prior experience also received one additional day of instruction in general interviewing techniques and using the CATI system. Previously trained interviewers assigned later to work on the MEF cases received 2 additional days of instruction that focused on the differences in administering this version of the questionnaire.

Given the large size of the interviewer staff required to conduct NEHIS, it is not surprising that the vast majority of persons hired were not particularly knowledgeable about the survey's subject matter. Also, the limited training period did not provide ample opportunity for the less-informed interviewers to adequately master the complex concepts of NEHIS. Because the NEHIS experience showed that the best interviewers were those few who had some subject matter knowledge, future designers of similar employer surveys should entertain using trained professionals, such as economists, as interviewers. Survey designers should also consider whether it would be more cost effective to adopt this approach; namely, whether the higher salaries would be offset by increased unit and item response and less data processing due to fewer inconsistencies in the data.

NEHIS telephone interviews were monitored by project staff throughout the field period and their observations were periodically discussed with each interviewer (appendix VII). In addition to Westat, Inc. monitoring, extensive monitoring was also done by government staff. A total of 4,964 monitoring forms were completed, which resulted in a monitoring rate of one form for each 7.7 completed interviews, excluding SENE's. In addition, individual interviewer performance levels were evaluated regularly. Other meetings were also scheduled with all interviewers as needed to review procedural changes and provide further training on commonly occurring problems.

Case management

NEHIS used an automated CATI system that delivered new and partially completed cases to the next available interviewer, tracked appointments and callbacks, and logged all contact attempts. Although this call scheduler system allowed interviewers to enter appointment and other recommended callback times, project staff set the parameters that regulated the flow of new work versus callbacks, the distribution of work across States and time zones, the number of callback attempts before supervisor review, and the variation of calls across days of the week and times of the day. In most cases, the number of telephone calls allowed was unlimited, provided some contacts occurred. Cases with no contact after six attempts, however, were automatically routed to tracing.

The CATI system also contained a feature that delivered certain types of cases to specific interviewers. Interviewers identified as adept in refusal conversion were sent initial refusal cases. Cases not completed after 14 call attempts were also routed to a special group of interviewers. Given the complexity of NEHIS, eight separate work classes were set up to handle recurring problems requiring special treatment. Other work class groups handled cases with union-sponsored insurance plans that received no employer contributions, differing plan years for plans offered at an establishment, plans replaced with other plans during the plan year, establishments with changed names or addresses, and previously completed cases returned after editing for additional follow up.

Although the data collection methodology designed for NEHIS did not provide for interviewer "case management" except for the largest MEF's (see "Special procedures for multiestablishment firms"), such an approach may actually improve data quality. Potential benefits would likely include greater respondent/interviewer rapport, increased interviewer responsibility for assuring complete, accurate, and consistent data, improved respondent reporting motivation and commitment, and reduced reporting redundancy. Research into the effects on data quality as a result of assigning one interviewer versus multiple interviewers per case, even for smaller establishments, is recommended for such future surveys.

Special procedures for multiestablishment firms

Because data collection for MEF interviews was more complicated than that for SEF interviews and often required considerably more time to complete, a number of different interviewing approaches was developed to handle these cases.

Two significant changes initiated for MEF cases were off-line data collection and assigning case ownership to one interviewer for mega-MEF's (i.e., firms with more than 10 sampled establishments).

MEF interviewers frequently recorded information initially on paper when respondents reported it differently than how it was obtained in the CATI questionnaire. Also, with off-line data collection, respondents could fax or mail the requested information. In both cases, interviewers or other project staff entered the information into the CATI system after it was collected off line. The CATI structure also was modified during the field period to enable interviewers more flexibility in completing the MEF questionnaire. For example, interviewers were encouraged to conduct these interviews in shorter segments and to find alternate respondents for some sections of the questionnaire.

Even with the special measures taken to complete these cases, MEF response rates were considerably lower than expected and respondent burden in many of the cases was excessive. The total length of the MEF interview was particularly problematic when the same respondent responded to all of the questions for all sampled locations. For future surveys this issue should be resolved with alternative approaches developed to reduce the ultimate burden placed on large firms.

Special procedures for governments

From the perspective of data collection operations, the NEHIS government cases consisted of five main types of governments: Federal, quasi-Federal,[27] State, local, and purchasing units. Purchasing units could include State and local governments or exclusively local governments; but all entities in a purchasing unit, by definition, were within the same State.

Through an interagency agreement, the U.S. Office of Personnel Management (OPM) provided data for the Federal Government and most quasi-Federal agencies, including employee counts by State. The information received from OPM was transcribed to a detailed worksheet (appendix VIII). This form itemized all of the NEHIS data items to be obtained about Federal Government's employees in each State and their health insurance plans. Information for quasi-Federal agencies was obtained using a combination of CATI screens and special worksheets designed to facilitate collection of those data. Respondents contacted for these cases were given the option to return the information via the mail.

Data for State employees were provided by the appropriate offices within each State except Maryland, Virginia, and the District of Columbia, which declined to participate in NEHIS. State government interviews varied depending on whether the State provided health insurance to local government employees. In some situations paper questionnaire items replaced the CATI version or some responses were recorded on special worksheets. The most tedious and potentially time-consuming component of purchasing unit interviewing involved confirmation and identification of the purchasing unit membership, which was handled off line. Interviews with local governments that did not belong to a purchasing unit were conducted entirely with the CATI (Government version) questionnaire. For specific details regarding the NEHIS data collection procedures for governments, see *National Employer Health Insurance Survey (NEHIS) Volume III: Methods Report—Data Collection* (9).

Procedures for self-employed individuals with no employees

As mentioned previously, a different data collection method—telephone interviews with a paper questionnaire—was used in interviewing SENE respondents. As a result, some of the operational tasks that were built into the NEHIS CATI methodology (e.g., case assignment work flow, progress reports, and CATI edits) were handled manually for SENE cases. For example, during the first week of data collection, supervisors hand edited all completed cases to ensure that the interviews were complete and skip patterns were followed correctly.

Another difference was that an advance letter was not initially mailed to SENE respondents. Interviewers only mentioned the letter when they thought it would help to convince respondents to participate if they better understood the survey. In these cases most respondents were satisfied with having the letter read to them. Only a few cases required mailing or faxing a copy of the letter before the respondent was willing to participate in the interview.

Given the relatively straightforward questionnaire and procedures used for interviewing SENE cases, interviewer training was conducted in about one and one-half days (compared to 4 days or more for other NEHIS cases). Like other NEHIS cases, SENE interviews were monitored throughout data collection.

For specific details regarding the NEHIS data collection procedures for SENE's, see chapter 5 of *National Employer Health Insurance Survey (NEHIS) Volume II: Methods Report-Instruments* (6) and chapter 8 of *National Employer Health Insurance Survey (NEHIS) Volume III: Methods Report-Data Collection* (9). Selected data findings from the SENE survey are forthcoming (7).

[27] Quasi-Federal governments are a collection of entities with Federal charters or mandates that are not part of the executive, judicial, or legislative branches; examples include the Tennessee Valley Authority and the Federal Deposit Insurance Corporation.

Length of interview

The CATI data base did not compute the total elapsed time for many NEHIS interviews, as callback times for partially completed questionnaire sections were not separately tracked. However, elapsed times for those sections completed at one time were maintained. Average durations of different types of interviews are calculated, therefore, using average total section times based on these specific cases.

The length of the NEHIS interview varied considerably, depending on whether the establishment offered health benefits and how many plans were offered. The average estimated mean interview ranged from 9 minutes for a government case with no health benefits to 5 hours for a large MEF **(table B)**. Although these estimates become less reliable as the interview time increases, it is clear that many NEHIS interviews were too long, contributing to the lower response rate obtained for MEF cases and large establishments. Time spent attempting to contact respondents and respondents' time apart from the telephone interview gathering information from records or other sources are also not reflected in these estimates.

Although the per establishment interview time for a MEF case was probably not very different from a government or SEF case, the total time burden for a single respondent was considerably higher. Estimates of actual MEF interview lengths are also subject to considerable uncertainty, because frequently not all sections were completed, individual sections often required callbacks, and times for data collection that was completed off line were not computed.

Table B. Estimated mean interview length for selected case types

Type of case	Estimated mean interview time
SEF[1] not offering health insurance	10 minutes
Government not offering health insurance	9 minutes
SEF with 1 plan	30 minutes
Government with 1 plan	28 minutes
SEF with 2 plans	45 minutes
SEF with 3 plans	1 hour
SEF with more than 5 plans	1 hour 40 minutes
MEF[2] with 5 sampled establishments, 3 national plans	1 hour 20 minutes
MEF with 10 sampled establishments, 2 national plans, 5 local plans	3 hours
MEF with 15 sampled establishments, 2 national plans, 15 local plans	5 hours

[1]SEF is defined as an organization or company with one sampled location.

[2]MEF is defined as an organization or company with more than one sampled location.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey. 1994.

Refusal conversion

The complexity of the questionnaire and the specificity of the data requested contributed to some respondents' reluctance to participate in NEHIS. As mentioned previously, MEF's were the most difficult cases to complete and the most burdensome to respondents. The NEHIS objectives, however, required response rates for all types of business establishments that were high enough to support the reliability of the wide range of estimates produced.

Throughout data collection considerable effort was directed toward avoiding refusals and attempting to convert initial refusals into completed cases. Converting MEF refusals were particularly critical because such a refusal resulted in separate refusals for each sampled establishment within that MEF. All interviewers were given training in refusal avoidance. When initial refusals were encountered, however, the following procedures were initiated:

- The interviewer completed a Noninterview Report Form, identifying the respondent, the reason given for the refusal, and the strength of the refusal. (Hostile refusal cases were reviewed by supervisors to determine whether to pursue further conversion attempts.)
- A refusal conversion letter was sent to the establishment. Different versions were used for small businesses, large companies, and governments (appendix IX).
- Shortly after the conversion letter was mailed, a telephone call was made by an interviewer specifically trained in nonresponse conversion. MEF cases were assigned to specific interviewers, depending on the refusal reason (e.g., company policy; had no time; not interested).
- Second refusals were reviewed to determine whether a third attempt would be made. (A few of these final callback attempts were conducted by NCHS staff.)

Although such estimates of successful conversion attempts for SEF and MEF cases are not available, of the initial SENE refusal cases, 61 percent were converted to completed interviews.

Data retrieval

Midway through the data collection field work, a special data retrieval operation was undertaken to collect information on key data items that were missing from ''completed'' NEHIS interviews. Data retrieval was conducted independently of, yet concurrently with, the main survey. About 11,000 completed sample cases missing one key data item or more were identified as candidates for this data retrieval effort (representing about one-half of the interviewed-to-date SEF and government cases that reported offering health insurance coverage

to workers).[28] To obtain as much additional information as possible within available resources, yet not to interfere with the ongoing survey, approximately 6,000 of these establishments were selected for data retrieval with oversampling of those cases thought to be most likely to respond.

As background when key items were missing at the conclusion of the original NEHIS interview, respondents were asked to identify some person who could provide this information. Responses were assigned to one of six categories: "Me now," "me later," "someone else," "no one", "don't know," or "refusal."[29] (There was also a "not asked" category because this question was not used during the first few weeks of NEHIS data collection.)

The over sampled cases were identified in the following way. All cases classified as "me now," "me later," "someone else," "don't know" or "not asked" were selected for data retrieval (about 4,500 cases). In addition, about one-fourth of the cases with a response of "no one" were sampled for data retrieval (about 1,600 cases). The few cases with a refusal to this question were not included.

Items identified for data retrieval included:

Establishment variables—

- Total eligible employees
- Total enrolled employees
- Total payroll
- Total health insurance costs
- Total health insurance cost as a percent of payroll

Plan variables—

- Total annual costs
- Total claims paid
- Total administrative costs
- Total stop-loss premium
- Total premium or premium equivalent for single coverage
- Total premium or premium equivalent for family coverage
- Employee contributions for single coverage
- Employee contributions for family coverage
- Number of employees enrolled at end of plan year

This data retrieval task was conducted using a paper questionnaire by interviewers who had also worked on the main survey; thus, only one day of training in the procedures, materials, and protocols for data retrieval was needed. Interviewing for this activity began in late October 1994 and continued for about one month. During that time 5,541 of the 6,064 cases selected for data retrieval were reached.

Data retrieval interviewers were given somewhat more latitude in seeking out knowledgeable respondents than for the main survey. For example, they made suggestions to respondents as to the types of people within the establishment that might have access to the missing information. They also encouraged respondents to go outside the firm for information when necessary, or obtained authorization to do this themselves. Some respondents gave interviewers the names of their insurance companies, agents, or customer representatives who the interviewers then called. Although this sometimes resulted in information being readily obtained, oftentimes outside contacts would not provide the information without the employer's written permission.

Item for item, the cost variables were the most difficult to obtain during the main survey and also were retrieved at the lowest rate during data retrieval. Among these the least successful was total claims paid for fully insured plans, obtained for 53 percent of data retrieval cases. This compares with other cost variables, obtained for 75 to 85 percent of data retrieval cases, and noncost variables obtained for 95 percent or more of data retrieval cases.

In summary, about two-thirds of the data retrieval cases provided at least some information; of these, about one-half provided all the missing data. However, because data retrieval was limited to approximately one-half (5,541 of 11,096) of the SEF and government cases with missing key data items, and not attempted at all on the MEF's, the overall effect of data retrieval on item nonresponse for the full NEHIS analytic data base was reduced accordingly. Nevertheless, these results demonstrate that similar employer surveys should seriously consider integrating some type of data retrieval activity with the main data collection effort.

See also *Report on Data Retrieval for Missing Critical Variables* (10) for further details and findings of the data retrieval project.

Response rates

Unit response rates

The NEHIS design specifications called for a final unit response rate of at least 70 percent. Although the overall response rate that was achieved for NEHIS met that goal—about 72 percent **(table C)**—there was substantial variation in response by type of sample case, as well as by State and firm-size. Although large businesses are probably not inherently more likely to refuse an interview than small businesses, the increased NEHIS design demands for those respondents had a negative effect on response as reflected by the disappointing lower completion

[28]The data retrieval activity was conducted only on SEF and government cases with missing data items because of the complexity of MEF interviews and the number of contacts typically made with MEF respondents. Establishments not offering health insurance were also ineligible for data retrieval, because none of the key missing data items applied to these cases.

[29]When a "me now" response was obtained, interviewers obtained the missing information from the respondent on the spot and recorded it in a "Comments" section. This information was reviewed during data editing, and only cases still considered to have missing data, after this review were left in the data-retrieval case pool.

Table C. Final unit response rates by sample type

Sample type	Response rate (percent)
All cases	72
SEF[1]	77
Total MEF's	52
MEF[2] (2–10 locations)	51
MEF (11 locations or more)	53
Total SEF's and MEF's	71
Governments	85
SENE[3]	82

[1]SEF is defined as an organization or company with one sampled location.

[2]MEF is defined as an organization or company with more than one sampled location.

[3]SENE is defined as self-employed individuals with no other employees and no other locations.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey. 1994.

rates for MEF interviews (51 to 53 percent) compared to SEF interviews (77 percent). Greater CATI instrument development time for MEF's and the decision to postpone interviewing MEF cases until iterviewers had gained some expertise in interviewing the simpler SEF cases also delayed the onset of MEF data collection. Unfortunately, NEHIS budgetary and data release time constraints precluded extending the MEF data collection period even though those cases were being worked when field work ended. Except for the nonparticipation of the State governments of Virginia and Maryland and the government of the District of Columbia, government respondents were very cooperative at all levels, as reflected by the final public sector unit response rate of 85 percent. SENE respondents were also very willing to be interviewed. In fact, all SENE respondents that were contacted and found to be eligible to participate (about 82 percent of the SENE sample) completed the NEHIS interview.

The NEHIS response rates by State also showed marked variation, as seen in **figure 1**. States with the highest rates of response among private sector establishments were mostly those located in the West North Central, Mountain, and Pacific census divisions of the country, whereas States having the lowest rates of response were in the Middle and South Atlantic census divisions. Response rates for private sector establishments by State and firm-size are shown in **table D**. Overall private sector response rates varied widely among individual States, from 61 percent in New York to 86 percent for Montana. As mentioned previously, larger establishments were less likely to respond. For example, about 55 percent of establishments in firms with 1,000 employees or more responded to NEHIS compared to about 78 percent of establishments in firms with fewer than 50 employees. Among private sector establishments in firms of fewer than 50 employees,

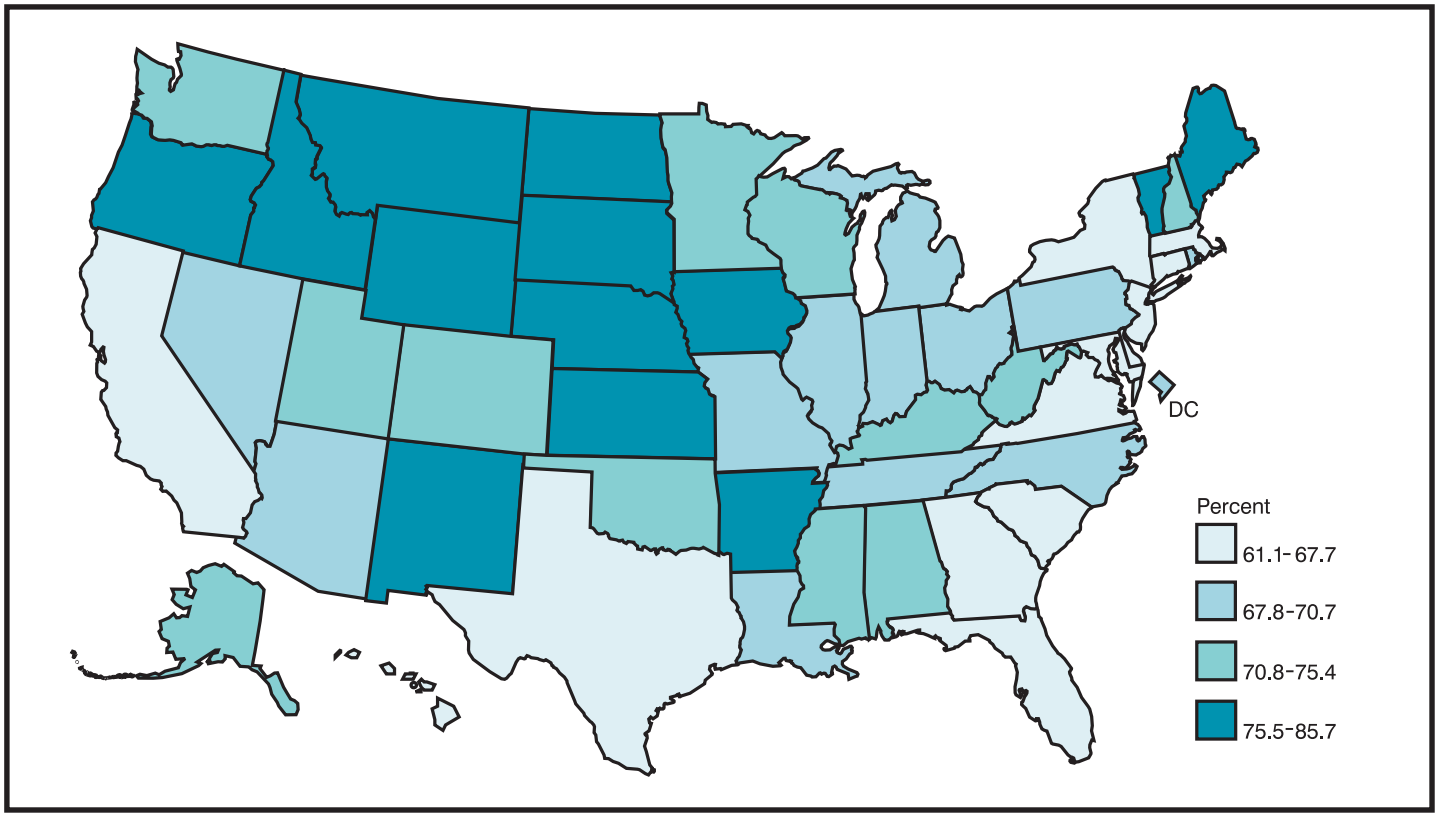


Figure 1. National Employer Health Insurance Survey unit response rates (private sector establishments)

Table D. Private sector establishment unit response rates by firm size and State: National Employer Health Insurance Survey

State	All firm sizes	Firm size[1]										
		Fewer than 100 employees				100 employees or more						
		Total	Fewer than 10 employees	10–24 employees	25–99 employees	Total	100–499 employees	500 employees or more	100–999 employees	1,000 employees or more	Fewer than 50 employees	50 employees or more
United States	70.5	77.3	78.1	76.3	74.9	60.2	70.8	56.1	70.3	54.6	77.6	63.0
Alabama	70.8	78.1	78.2	73.3	80.8	61.8	71.7	58.7	72.2	56.9	77.9	64.6
Alaska	74.8	78.9	78.3	72.5	87.1	66.3	67.0	66.0	72.8	61.4	78.3	69.5
Arizona	70.3	78.8	79.8	70.4	79.7	58.5	74.9	52.4	71.0	52.0	78.9	62.2
Arkansas	75.7	82.3	82.9	83.8	79.5	65.4	78.2	61.4	82.3	57.4	82.1	68.7
California	66.0	73.8	76.2	69.3	68.6	54.2	65.7	49.8	64.0	48.5	74.6	57.2
Colorado	70.8	78.9	79.4	81.1	76.1	57.6	73.3	51.8	73.5	49.2	79.3	61.0
Connecticut	64.4	70.5	71.1	69.6	69.1	55.1	72.0	47.8	70.6	46.1	70.6	57.8
Delaware	63.3	73.7	72.7	75.1	75.6	49.6	56.9	47.7	55.2	47.3	73.2	53.7
District of Columbia	67.8	71.9	70.2	73.0	75.5	62.1	74.8	56.8	69.1	57.1	70.1	66.0
Florida	63.7	70.7	70.8	68.6	71.3	53.6	63.1	50.6	62.9	49.1	71.2	56.5
Georgia	67.3	75.4	76.9	70.9	74.7	59.2	70.5	55.7	67.7	55.4	75.2	61.5
Hawaii	66.1	71.4	67.9	74.9	76.4	59.3	65.9	55.9	66.5	53.7	69.8	63.1
Idaho	75.5	83.6	84.2	83.4	81.1	58.1	75.8	52.0	75.9	49.0	83.5	63.2
Illinois	68.9	74.5	74.5	77.4	72.6	60.9	71.2	56.8	69.2	56.3	74.7	63.4
Indiana	70.6	78.8	80.1	73.6	78.1	59.7	67.9	56.0	68.6	53.9	78.2	63.8
Iowa	80.9	86.0	86.3	91.6	80.3	70.8	78.1	68.3	78.4	67.1	86.7	72.9
Kansas	77.7	81.6	81.0	80.8	83.9	71.3	75.7	69.6	75.7	68.9	81.6	73.2
Kentucky	71.1	79.6	82.6	77.3	72.0	59.7	71.4	55.2	70.3	53.7	80.9	62.0
Louisiana	69.0	74.3	76.4	71.3	71.0	61.9	67.6	59.9	69.5	58.1	75.6	63.1
Maine	78.4	82.6	83.7	85.2	76.9	69.4	81.4	63.5	82.1	59.2	83.6	71.1
Maryland	66.2	70.8	73.3	66.9	65.3	59.3	63.3	57.4	65.3	55.7	71.2	61.1
Massachusetts	65.3	71.6	72.6	70.3	69.6	55.9	67.2	51.2	66.0	49.8	71.4	59.3
Michigan	68.9	73.8	75.2	73.3	69.3	61.1	76.6	55.3	74.4	53.5	74.5	62.8
Minnesota	74.5	83.3	83.6	81.9	82.0	60.4	70.2	55.9	68.8	54.7	83.6	64.8
Mississippi	72.1	79.5	80.5	71.9	80.7	62.2	70.6	59.2	69.3	58.3	79.1	65.4
Missouri	70.3	79.4	79.7	83.6	74.7	57.7	71.2	53.0	69.8	51.9	80.5	60.7
Montana	85.7	89.9	89.9	94.4	86.1	74.0	85.1	69.2	81.4	69.6	90.2	77.7
Nebraska	78.0	84.4	83.7	82.4	87.4	66.3	75.4	63.1	75.6	61.0	84.1	70.4
Nevada	68.4	73.7	74.1	74.8	72.7	61.0	72.3	57.2	71.8	55.7	73.8	63.4
New Hampshire	73.7	78.2	77.9	78.0	78.6	65.0	63.0	65.8	67.7	62.9	77.7	68.4
New Jersey	65.3	67.9	67.3	65.9	71.3	61.6	66.4	59.6	66.9	58.4	67.2	63.5
New Mexico	78.0	80.8	79.2	85.5	83.0	73.1	86.5	68.7	87.6	65.1	80.6	74.6
New York	61.1	66.1	66.8	62.4	65.1	53.4	58.9	50.6	61.3	48.0	66.2	55.7
North Carolina	67.8	76.5	76.7	78.4	74.2	58.3	73.2	53.2	71.7	52.2	76.5	61.1
North Dakota	80.3	85.9	85.3	90.7	83.8	68.3	75.7	64.3	74.4	64.1	86.6	71.0
Ohio	69.0	77.1	79.3	78.7	69.4	58.7	72.4	53.3	71.9	51.5	78.0	60.9
Oklahoma	71.7	78.6	80.0	71.7	77.3	58.9	70.0	54.0	69.4	52.9	79.3	62.0
Oregon	75.9	82.8	82.5	76.6	87.0	62.9	78.2	56.0	76.4	54.0	81.9	68.4
Pennsylvania	70.1	77.1	77.4	77.1	76.5	59.8	70.3	55.4	66.7	55.5	77.4	62.8
Rhode Island	68.1	71.7	73.9	67.8	65.3	61.1	64.9	58.9	68.3	55.4	72.0	63.0
South Carolina	66.8	75.3	76.8	78.0	68.9	57.2	70.3	53.8	69.1	52.6	76.7	58.7
South Dakota	82.3	88.2	88.8	87.2	85.1	66.6	83.8	57.4	85.1	53.3	88.7	71.4
Tennessee	70.0	79.0	82.8	73.8	72.4	60.0	63.8	58.7	67.6	56.2	80.1	62.1
Texas	67.3	73.2	74.4	73.3	68.5	59.7	77.3	54.0	74.4	52.6	74.4	60.6
Utah	74.2	82.8	87.2	80.9	71.0	62.7	76.9	57.5	77.0	55.0	85.4	63.4
Vermont	77.9	82.7	83.1	88.7	76.9	64.2	78.2	54.4	75.7	52.7	83.7	66.8
Virginia	65.8	74.1	75.8	75.4	68.0	54.7	60.4	52.8	60.3	52.0	75.2	57.1
Washington	73.0	79.8	80.0	80.7	77.5	61.4	79.1	54.8	76.6	52.6	80.5	63.8
West Virginia	71.5	81.6	83.1	79.1	77.3	57.6	66.1	54.6	66.9	53.1	81.9	61.1
Wisconsin	74.8	81.4	81.5	82.2	80.8	64.5	79.1	57.2	72.4	58.5	81.7	67.8
Wyoming	80.5	86.6	85.2	92.8	89.8	67.0	68.2	66.6	70.3	65.3	85.9	71.7

[1]Firm-size available from the Dun's Marker Identifiers file and adjusted by Westat, Inc., used for sample selection.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey. 1994.

Table E. Number of sampled private sector establishments and governments and response rates (percent)

Outcome	Row	Private sector establishments	Public sector (Governments)	Total[1]
Fielded sample cases	a	80,845	4,420	85,265
Ineligible[2]	b	12,449	532	12,981
Out of scope[3]	c	6,572	108	6,680
Not found[4]	d	9,666	28	9,694
Nonrespondents	e	17,554	538	18,092
Screened nonrespondents[5]				
Eligibility unknown	f	13,841	364	14,205
Eligible	g	3,713	87	3,800
Eligibility rate among all screened cases	h	75.9 percent[6]	84.4 percent[7]	76.5 percent
Final unit response rates				
Numerator: a−(b,c,d,e)	i	34,604	3,214	37,818
Denominator: i+g+0.03*d+h*f/100	j	49,117	3,775[8]	52,892
Response rate	k	70.5 percent	85.1 percent	71.5 percent

[1]Excludes self-employed individuals with no employees.
[2]*Ineligible:* Zero employees, self-employed individuals with no employees and governments from *Dun's Market Identifiers* sample.
[3]*Out of scope:* Out of business; not a business; duplicate case.
[4]*Not found:* No contact made after repeated attempts.
[5]For the public sector, only local governments were screened.
[6]All screened private sector eligible cases (38,317) divided by the sum of all screened private sector eligible and ineligible cases (50,459).
[7]All screened public sector eligible cases (2,958) divided by the sum of all screened public sector eligible and ineligible cases (3,505).
[8]The public sector final unit response rate formula does not include the estimated 3 percent of eligible cases among "not found" cases. The estimates of 3 percent was derived from research results of site visits to a sample of addresses of cases in Maryland that were not located. See "Methodological and evaluation projects" section.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey. 1994.

New York still had the lowest response rate (66 percent) while Montana again produced the highest response (90 percent).

Conceptually, the NEHIS unit response rate represents the total number of completed and partially completed interviews divided by the estimated number of eligible cases in the sample. Somewhat different formulas (described in **table E)** were used to derive response rates for the private and public sectors because there were cases in the public sector that were selected with certainty and required different specifications. **Table E** contains the number of sample cases associated with each of the formula components that were used to derive the NEHIS final unit response rates for private sector establishments (excluding SENE's) and governments.

Unit Response Rate (private sector) = Completed and partially completed cases ÷ *x* where *x* is the sum of the following four components:

1. Complete and partially completed interviews
2. Nonresponding known eligible establishments
3. Three percent of sampled establishments not located[30]
4. Located (screened) nonresponding establishments estimated to be eligible (i.e., the eligibility rate for screened cases multiplied by the number of screened nonrespondents)

Unit Response Rate (public sector) = Completed and partially completed cases ÷ *x* where *x* consists of the sum of the following three components:

1. Complete and partially complete interviews
2. Nonresponding known eligible establishments
3. Located (screened) nonresponding establishments estimated to be eligible (i.e., the eligibility rate for screened cases multiplied by the number of screened nonrespondents)

The government (public sector) unit response rate does not include an estimated percent of eligibles among not found cases because of the small number (28 governments) and because it was assumed that the 1992 Census of Governments file was likely to be current.

As shown in **table F**, a high completion rate was obtained for the health insurance plans that were sampled for NEHIS (about 93 percent).

[30]See footnote 8 of table E.

Item response rates

As previously described, NEHIS interviews were conducted with the "most knowledgeable" respondent(s), and other methodologies were employed

Table F. Response rates for sampled health insurance plans

Sample type	Plan response rate (percent)
All plans[1]	93
Private establishments	92
Governments	94

[1]Excludes plans for self-employed persons with no employees.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey. 1994.

during data collection to reduce item nonresponse—one potential source of nonsampling error. As a result of these procedures, item nonresponse was low for most survey estimates (about 10 percent or less). However, several of the data items had very high nonresponse:

- 1993 payroll (60 percent)
- Total 1993 health insurance costs for all plans (64 percent)
- Total plan cost for self-insured plans (45 percent)
- Annual stop-loss premiums (37 percent)
- Total claims paid (28 percent)
- Total annual premiums for fully insured plans (73 percent)

Details of NEHIS' item response rates go beyond the scope of this report. However, appendix III (column c) contains the item response rates available to date for NEHIS' major analytic variables. Data users should exercise caution in interpreting results based on estimates with low item response and/or establishment response rates. Further, the Office of Management and Budget considers data with combined response "at the survey and item response . . . below 60 percent . . . insufficient for analysis."[31]

Methodological and evaluation projects

NEHIS also carried out several different methods studies, which are described in the following sections, to assess overall data quality of the survey.

Record check study

The Record Check Study, also conducted by Westat, Inc., was undertaken to assess the quality and accuracy of health insurance plan information obtained from the survey, and determine which data source—CATI or plan brochures—provided the most complete and accurate information for specific types of plan benefits.

Briefly, a systematic sample of approximately 3,000 private sector employers interviewed for NEHIS that provided health benefits to employees was requested to mail their 1993 health insurance plan literature, such as brochures and summary of benefits sheets. Data collection began in April 1995—about 4 months after the NEHIS data collection period had ended—and continued for about 3 months. Information obtained from selected health plan questions during the original telephone interview was compared to similar data items abstracted from matching health insurance brochure documents, and response error rates for key items were subsequently generated.

Selected findings from this study are:

- For most covered services, estimates derived from NEHIS and brochures were similar. Items with lowest agreement included: Mammograms, pap smears, prescription drugs, nursing home care, mental health, and home health care.
- Only about 75 percent of covered services reported in the NEHIS interview could be abstracted from brochures.
- Respondents' use of brochures during the telephone interview significantly improved the accuracy of reported services.
- For accurate and complete reporting of employer health plan data, knowledgeable respondents and the use of plan brochures are needed.

Follow-back interviews with survey respondents

This small, in-house reinterview project was intended to obtain a subjective, yet descriptive, assessment of the accuracy and completeness of responses and information recorded to selected key questions from the NEHIS questionnaire by reinterviewing a few businesses that participated in the main survey. For this study, in-depth personal interviews were conducted in June and July of 1995 at 19 business establishments located in the Washington, D.C., area. Three sources of potential problems were investigated: Respondent reporting, interviewer error, and question design problems. Respondents' opinions about the procedures that were employed to collect the information were also elicited.

The personal interviews were conducted by six, two-member teams of senior staff from NCHS and Westat, Inc.. Survey participants were drawn from a convenience sample of previously interviewed establishments who were willing to be reinterviewed when first contacted and were respondents for the original NEHIS telephone interview. The protocol for this project included a structured paper questionnaire, with cognitive reinterview methods used for administration. Most interviews, which lasted about 1 hour, were also tape recorded. The areas of inquiry touched on the following topic areas: General impressions of the survey, establishment characteristics, health insurance plans offered to employees, plan costs, plan administration, claims, premiums, enrollments, research methods, and recommendations for future surveys.

The reinterviewed sample cases were clearly not intended to be representative of the NEHIS survey population. The findings, nevertheless, provide additional insight for evaluating NEHIS data quality and guidance for survey planners of future employer health insurance surveys regarding survey questions and administration.

Readers interested in specific findings of this project and subsequent recommendations for future surveys should refer to *Quality Assessment of the 1994 National Employer Health Insurance Survey: Retrospective Cognitive Interviews with Employers* (11).

[31] Notice of Office of Management and Budget Action on OMB. No. 0920–0341, 3/25/94.

Union follow-up interviews

This methodological study, conducted by Westat, Inc. from June through August 1995, was initiated as the outcome of encountering unanticipated problems regarding collection of union-sponsored plan information from employers. Many respondents were unable to provide complete or accurate information about the union plans that provided benefits to employees at their establishments. Because a sizeable number of union members receive health benefits directly from their union and members of labor unions make up a substantial portion of the workforce (about 16 percent in 1990) (12), this experience pointed out the need for better survey methods in handling these types of health insurance arrangements.

Shortly after this project was undertaken, Westat, Inc.'s primary task focused on investigating ways to improve future methodology for collecting data on union-provided health plans. Part of that activity also included investigating differences in the way labor unions provide health insurance to their members. Cases followed up for this study were drawn from a subset of problem cases identified during NEHIS data collection.[32]

The contractor's conclusion drawn from this study was that future employer surveys acquiring data on union-sponsored plans would require a change from NEHIS in basic methodology. Specifically, those recommendations were:

- Exclude employees covered by union-sponsored plans for the establishment-based segment of the survey.
- Conduct a separate segment of the survey for union-sponsored health insurance plans, based on a sample frame of unions and professional associations.

These and other specific recommendations about the refined methodology for union-sponsored plans and other details about the data collection procedures followed for this project are described in *National Employer Health Insurance Survey Union Data Collection Report* (12).

National Employer Health Insurance Survey data comparability

Selected estimates from NEHIS were compared to several other data sources: 1993 Robert Wood Johnson Foundation, 1993 Employee Benefit Survey, April 1993 and March 1994 Supplements to the Current Population Survey, and several commercial surveys, including KPMG Peat Marwick, Foster-Higgins, and the Health Insurance Association of America. This project was intended to highlight the strengths and weaknesses of NEHIS and to enhance the validity of the NEHIS data, given that similar results were obtained from alternative data sources. It also attempted to identify reasons for differences between estimates when they occurred.

Preliminary NEHIS estimates compared included: Percent of businesses offering health insurance to employees, percent of employees enrolled in an employment-based plan, percent of businesses offering self-insured plans, percent of employees enrolled in self-insured plans, monthly premiums (or premium equivalents), and employee share of monthly premiums (or premium equivalents).

When using preliminary unimputed data from NEHIS, the estimates examined were generally found to compare favorably with one survey or more, despite significant differences across survey methodologies. For example, overall premium estimates for health insurance from NEHIS, Robert Wood Johnson Foundation, and the KPMG Peat Marwick surveys were similar (1). The most surprising result, however, was the lower NEHIS estimate of private establishments offering health insurance to employees among businesses with fewer than 50 employees, compared to the Robert Wood Johnson Foundation, Health Insurance Association of America, and Peat Marwick surveys. Specifically, the NEHIS results showed that about 42 percent of these employers offered health insurance to their employees, compared to about 50 to 51 percent for the three other surveys.

Given the magnitude of this difference, a separate evaluation effort was undertaken to identify the reasons for this variation. This subsequent analysis compared NEHIS and the Robert Wood Johnson Foundation survey estimates because both were designed to provide State estimates of employer-sponsored health insurance and thus used the same sampling unit (i.e., single business locations or establishments to provide private sector estimates). Also, the comparisons made were limited to the 10 States included in the Robert Wood Johnson Foundation survey (Colorado, Florida, Minnesota, North Dakota, New Mexico, New York, Oklahoma, Oregon, Vermont, and Washington). The findings revealed that methodological differences, especially the post-stratification adjustment, designed to improve the coverage and accuracy of NEHIS results contributed significantly to lowering the percent of establishments offering health insurance relative to the other survey.

See *Comparability of 1994 National Employer Health Insurance Survey Estimates with Other Employer Surveys*

[32]The selected sample included 251 cases where the establishment did not offer coverage but some employees were covered by union or association plans to which the employer did not contribute. In fact, only about one-half of these cases were contacted because midway through the project the contractor and the government determined that no new information was being gathered that was relevant to the objective of refining a methodology for future survey design.

(1) and *Effect of Methodological Differences on Estimates from Two Employer Surveys* (13) for other details on NEHIS data comparability.

Data processing

As described in some detail in the ''Questionnaire documents'' section, NEHIS data processing activities began concurrently with the onset of NEHIS data collection through the use of automated data capture and the on-line editing capabilities of the CATI methodology. ''Hands-on'' data editing was also an integral component of the data collection process in handling various interview and response situations not provided for within the programmed NEHIS CATI framework. Some of the data cleaning activities performed on completed interviews during data collection resulted in certain cases being returned to the interviewer pool for further follow up. The data retrieval effort also required manual data editing activities apart from the CATI system, as well as reinterviewing respondents to obtain the missing information. These data preparation activities and edits were intended to make the NEHIS data base more accurately represent the information received from respondents while creating consistent and reasonable case records. Additionally, NEHIS data processing included other subsequent operations, such as variable construction and imputation, where some degree of interpretation or manipulation of the data was employed. Details of the various data processing procedures are described next.

Data preparation

In addition to programmed CATI edits, another data quality procedure implemented in the NEHIS during data collection was the data preparation activity. Westat, Inc.'s data preparation staff were responsible for data quality procedures covering problem cases still being interviewed and ''completed'' cases assigned a final result code indicating completion.

Problem cases routed to ''data preparation'' included the following:

- *Interviewer errors* that could not be remedied on line but needed to be corrected before interviewing could proceed
- *Respondent reporting errors* requiring off-line correction before proceeding with the interview
- *Inconsistent or illogical responses* to CATI questions, precluding continuation of the interview until resolved
- *Write-in answers* to CATI questions used for questionnaire routing (less frequently)

All data preparation problem cases were initially reviewed by project supervisors. Depending on the problem, cases were then either fixed or forwarded to designated ''data prep'' staff, programmers, or to an appropriate work class group. For nonroutine problems, cases were set aside for later resolution by the data preparation working group.

One of the most frequently encountered problems requiring ''data prep'' intervention was when previously provided information in CATI (from another respondent or the respondent being interviewed) was subsequently reported as incorrect. Cases fitting this description were referred to data prep whenever the incorrect response sent the NEHIS interview down an inappropriate questionnaire navigational route, and on-line correction by the interviewer would require backing through and erasing a number of already completed CATI screens. With off-line editing, corrections could be made selectively in a questionnaire section without overriding all previously provided information.

For some kinds of frequently occurring problems, data preparation staff used utility programs to update the variables in a case record. In short, the complexity of the changes required in CATI and the frequency with which similar corrections were needed dictated whether Westat, Inc. designed a utility program to automate the correction or corrections were handled manually by data prep staff. For example, health insurance plans reported after the Plan Enumeration Segment was completed and plans recorded in error, were onerous to correct on line by the interviewer and occurred quite frequently, particularly in MEF cases. Therefore, utility programs were specifically developed for adding and deleting plan segments in the CATI data base.

Another mechanism whereby problems were identified by data preparation staff was the routine review of frequencies. This exercise was done for several reasons. Early in the NEHIS data collection activity, frequency reviews detected whether the CATI skip instructions were programmed correctly. Later on, these reviews were used to determine whether corrections by data preparation staff were producing other anomalies in the skip patterns.

Data preparation staff were also responsible for the following activities:

- Review of "Other (specify)" write-in entries to about 40 questions that provided this response option. Some of these entries then would require: Recoding of the response to an existing category, to ''don't know'', or directly into the analytic variable that was to be compiled in another data-processing step; adding a new code category to the CATI question; or correcting an apparent questionnaire routing problem.
- ''Comments review'' of completed cases to determine whether any changes to the case record were required. Of the 39,000 completed NEHIS cases, about 80,000 interviewer comments were in the CATI data base. Changes to the case record from ''comments review'' resulted in reopening some cases for further data collection.

After undergoing all data preparation editing activities, completed cases were reprocessed through the CATI edit program, which entailed about 2,000 edit checks. Case records found to violate a CATI edit were reedited or the failed edit was treated as in the standard CATI operating system; that is, for a soft edit failure, the variable was "flagged"; for a hard edit failure, the variable was given the value of "missing."[33]

Variable construction

After all data preparation activities were concluded, the next data processing procedure performed on the NEHIS data base was variable construction, which consisted of reformatting the edited CATI data items for analytic use. This processing step produced two kinds of recoded data items (variables) and included a series of range and consistency edits beyond what was programmed in the CATI edits previously described.

"Standardized variables" were derived by converting different responses to a common "denominator" for a given question or set of questions. For example, the CATI program collected employee monthly contributions towards a plan premium in a variety of ways, depending upon how the information was available to the respondent. The respondent could report an amount or a percentage, a single value or a range, and a monthly amount or an amount for some other period. The NEHIS variable construction process converted all of these different reporting formats into monthly dollar amounts. When values were reported in ranges, mid-points (or weighted mid-points if deemed necessary) were usually taken as the single analytic value.

The second type of recoded data items (or variables) compiled for analytic use were the newly derived variables, also referred to as "constructed" variables. The variable PLANTYP2, for example, recoded health insurance plan types reported by respondents to the final analytic plan type code category by also using information provided on the probe questions. For example, if a respondent originally reported that a plan was an indemnity plan but reported on the follow-up question that the employees paid less if they used preferred providers, then PLANTYP2 was coded as a preferred provider plan (PPO). Recoding of data items into analytic variables usually incorporated responses from multiple CATI questions and sometimes required elaborate and complex programming. (See appendix III for a list of analytic variables.)

The range and logical edits used during variable construction processing were implemented to check for consistency among the constructed values and, where possible, to calculate values for missing responses. For example, the number of employees eligible for health benefits had to be less than or equal to the total number of employees. Or, if the number of full-time employees eligible for health insurance was missing and the reported number of part-time eligible employees was less than or equal to the total number of eligible employees, the number of full-time eligible employees was calculated as the difference. There were also edits to ensure that the final values derived from the construction steps were logically consistent. In addition to these types of programmed edits, edits were also performed for individual cases that could not be made consistent with automated rules.

"SEFizing" was another editing procedure conducted on some constructed variables. Namely, respondents in multiestablishment businesses sometimes were unable to provide certain information specifically about the sampled establishment or health insurance plan offered at that establishment but could report it for the firm as a whole. This type of reporting most often occurred with plan enrollments and plan cost information. The SEFizing procedure involved either copying information for the firm into the corresponding variable for an establishment, such as whether a self-funded firm-wide plan had stop-loss coverage, or ratio-adjusting the firm level information to the establishment.[34] As an illustration of the ratio-adjustment procedure, plan costs given for the firm instead of the sampled establishment would first be divided by the plan's enrollment count for the firm to derive the plan cost per enrollee. Then, that amount would be multiplied by the enrollment figure for the establishment to estimate the missing establishment-level cost for the plan.

The following brief scenario describes the general approach employed in the variable construction process. Constructed variables were individually assigned to one of approximately 20 small sections of grouped variables that logically could be constructed together. Each section included either plan-related or establishment-related variables. The sections were arranged whereby constructed variables depending upon other constructed variables would be so ordered in the processing sequence. Suffice to say here, that many processing iterations were required within and across sections to produce data with the desired level of consistency and range integrity.

In theory, variable construction was performed after all data preparation activities and final CATI edits were completed. In practice, the construction of new variables and the imposition of new edits uncovered inconsistencies in the

[33]Hard edits set absolute limits on the code values that could be entered. Soft edits were defined by the expected ranges values could take and could be overridden by entering the same value twice.

[34]Separate flag variables identify those data items on individual establishment and plan records that were derived from the SEFizing procedure.

edited CATI data base that were largely the result of the data preparation operation, but were not caught by the CATI edits. Government and Westat, Inc. staff attended regular meetings where decisions were made about setting range limits and how to handle reported inconsistencies in the data base. These inconsistencies were sometimes resolved by changes to the CATI data base and sometimes by amending the variable construction programs to account for situations where CATI variables were not logically consistent.

From this editing and variable construction experience with NEHIS comes the recommendation that similar employer surveys add extensive range edits to the CATI program and incorporate some variable construction programs into the CATI system to check for and to enhance consistencies among related variables, especially the cost variables.

Imputation

Imputation is a process of assigning responses to data items with missing values. Imputation processing of NHIS analytic variables was conducted by Westat, Inc. in consultation with government staff. Key NEHIS establishment-level and plan-level estimates were imputed to reduce potential bias from item nonresponse, to produce more complete and representative data files,[35] and to facilitate data analyses. Budget and time constraints limited the number of analytic items that were imputed for NEHIS. Nevertheless, the list of imputed variables is still quite extensive—about 50 analytic variables (appendix III, column d).

Several different imputation methods were employed for NEHIS, as also noted in appendix III (columns e and f). The imputation methods included Hot Deck imputation, regression with random residuals, and modal (or other deterministic) imputation. In a few cases, more than one imputation method was employed for an analytic variable. In general, regression imputation was used when the auxiliary variables[36] were predominantly continuous and highly correlated. This method was chosen when there were sufficient auxiliary variables for respondents and nonrespondents available to model the response for the analysis variable. The Hot Deck imputation procedure was most often used with categorical variables, when auxiliary variables were less correlated with the analysis variable, or when the level of missing data was low. When the item nonresponse rate was extremely low or there were few missing records, a deterministic method, such as mean, median, or modal imputation, was usually selected.

Because the method of imputation could have a significant impact on the precision of the survey estimates (depending on the extent of missing data), consideration was given to the effect of the chosen procedure on the variability and bias of the survey estimates.[37] An optimum method was determined for each imputed variable by considering the rate of nonresponse and correlations among the variables.

With the Hot Deck imputation procedure, missing values were replaced by corresponding values obtained from a donor, where the donor had similar characteristics to the establishment or plan with the missing value (i.e., the donee). This was accomplished by creating imputation cells defined by cross-classifications of variables identified as being correlated to survey measures. Potential donors and donees were placed into imputation cells based on their characteristics, and donors were then selected at random from the pool in that cell. As part of the imputation process, care was taken to impute values that were consistent with reported values.

As there were clear differences in the patterns and rates of nonresponse among six distinct subsets of the NEHIS sample, defined by sector (public and private) for the establishment-level variables, and sector by insurance type (self-insured and fully insured) for plan level variables, imputation was performed separately for each of these sample subsets for all imputed variables. Imputing for the 50 analysis variables required about 175 imputation models by variable type (establishment level / plan level), sector (public / private), and insurance type (self insured / fully insured). All variables involved in the NEHIS imputation process were also subject to rules of consistency used in variable construction to ensure these data were free of inconsistency and invalid data. For further information regarding the NEHIS imputation procedures and the specific method(s) used for each of the NEHIS imputed variables, refer to *National Employer Health Insurance Survey Proposed Methods for Imputing Variables* (14).

Treating imputed data as if they were reported values is likely to lead to an understatement of the variability associated with survey estimates. Therefore, care must be taken when computing the precision of estimates derived from the NEHIS data sets that include significant percentages of imputed data. Determining how to adjust variance estimates to properly reflect the use of imputation has been a concern of NCHS (and others) for many years. This adjustment is not simply a factor of the reduction in sample size, but reflects other factors, such as the random sampling of donors

[35]Separate flag variables were also created for each imputed variable to enable data users to identify values in the data file derived from imputation.

[36]Auxiliary variables for a given analysis variable consist of variables that are highly correlated with the analysis variable and not highly correlated with the other auxiliary variables.

[37]The best imputation procedure is considered to be the one that produces survey estimates with minimum mean squared error.

of imputed values. Another precautionary note relates to potential artificially high correlations among imputed plan variables in MEF establishments. By design all cases belonging to the same MEF received identical imputed values for a missing data item. Westat, Inc., for example, used only one record per MEF when computing correlations. Analysts may also decide to compensate in some way for this feature in conducting plan level analyses, especially when performing regressions for modeling purposes.

Analytic file construction

As previously described, two types of estimates are available from NEHIS, apart from the SENE data—estimates about establishments and estimates about health insurance plans. These different types of estimates also mirror how NCHS' NEHIS in-house analytic files are configured, namely, separate files for NEHIS' establishment and plan data.

Briefly, the in-house NEHIS Establishment File contains one record for each government and private sector sample case (excluding SENE's) with a final result code equivalent to ''completed or partially completed'' interview. The in-house NEHIS Plan File contains one record for each enumerated health insurance plan that was offered at a business establishment or government with a completed (or partially completed) interview, and was selected with certainty or was a subsampled plan (i.e., when more than five enumerated plans). The NEHIS SENE File contains one record for each self-employed individual; all plan information for that individual also is included on this record.

Unlike the edited CATI Establishment, Plan, and SENE Files, NEHIS' analytic in-house files do not contain the vast majority of original CATI variables. Instead, these files mostly contain constructed variables that are of more analytic interest to data users. They also contain a number of new analytic variables specifically constructed to facilitate data analysis. Although inconsistencies (negligible percent of all cases) between some analytic variables remain in the in-house analytic files, greater data consistency and data reliability exist in comparison to the edited CATI files. The inconsistencies that remain, however, occur mainly among cases with multiple respondents providing inconsistent responses and as a result of the various ways and levels of the company/organization in which responses were reported. Finally, in a few cases, the survey weights and the survey design variables used for variance estimation are different from what appear on the edited NEHIS CATI files for those particular records.

All of the NEHIS in-house data files were subject to a number of data quality control checks to assure that: The analytic recode variables included on the files were correctly constructed; high levels of consistency among the major analytic variables were achieved; and the derived estimates from the files are reliable (i.e., by comparing NEHIS' results to other available data sources).

Data processing for self-employed individuals with no employees

Because the SENE interview used a paper questionnaire instead of a CATI document, editing of SENE records first consisted of ensuring accuracy of the records to the information provided by respondents and ensuring consistency with the questionnaire specifications. This was accomplished through a separate automated software program that replicated the skip patterns in the SENE questionnaire and contained range and consistency edits. Final construction of the SENE analytic data file, as a result, included more post-data collection editing and reformatting than was required for the CATI Establishment and Plan Files. Similar data quality and variable construction procedures were implemented, however, SENE data were not imputed. Further, those data items with particularly high nonresponse, such as premiums, deductibles, and copayments, were not edited or included on NCHS' analytic in-house SENE file, given the questionable quality of the data.

Survey weights

The probability design of the NEHIS establishment sample allows the data to be weighted to produce representative national and State-level establishment estimates.[38] A similar design for health insurance plans also allows for sampling weights to support such detailed analysis of plan data. In fact, with few exceptions, unweighted data should not be used for analyses as unweighted data ignore the disproportionate sampling used in NEHIS.

The multistage estimation procedures used for both of these samples produce essentially unbiased State and national estimates. The uniqueness of these two sampled data bases—establishments and plans—required the construction of two sets of weights. The weights for the sample of establishments include four basic components: Inflation by reciprocals of the probabilities of selection, adjustment for nonresponse, trimming of excessive weights, and post-stratification to independent universe counts, which (as of now) has been performed on private sector cases only. The weights for the sample of plans include the first three components mentioned. In addition, it should be noted that one of the components of the plan base

[38]Only national estimates are available for SENE cases, as previously explained. A description of the SENE weighting procedures can be found at the end of this section.

weight is the weight of the establishment from which the plan was selected where a post-stratification adjustment was performed.[39]

Every establishment and plan record that comprises the NEHIS data files contains the appropriate constructed weight for data analysis. By aggregating these weights, estimated totals for national and State data can be obtained.

Establishment weight

The ''base weight'' was computed first. Every establishment and government[40] on the NEHIS sampling frames had a known, nonzero probability of selection. The base weights were equal to the reciprocal of the stratum sampling rate, except in the following special situation. The base weights for sample establishments not located (about 9,700 establishments) were adjusted by 0.03 because of the uncertainty of their eligibility. This adjustment factor was derived from results of investigating the eligibility status for a small sample of 50 cases in Maryland that were not located. For these cases site visits and other special efforts were undertaken to determine their likely eligibility status. Based on those findings, an eligibility rate of 3 percent was determined appropriate for all NEHIS sample establishments that were not located.

The largest base weights were 714.8 in the private sector and 177.2 in the public sector.

A ''nonresponse adjustment'' was carried out on the adjusted base weight in several stages. The objective of the nonresponse adjustment was to reduce the mean square error of the survey estimates by minimizing potential bias resulting from nonresponse by eligible establishments. The nonresponse adjustment was performed separately for the public and private sector.

- In the first stage, eligible cases were adjusted to account for establishments whose eligibility status was unknown. For the private sector, the adjustment cells were based on State, firm-size, and establishment size. For local governments, adjustment cells were formed by type of government. The adjustment factor was the ratio of the sum of the weights of all sample cases to the sum of the weights of all sample cases except nonrespondents with unknown eligibility.
- In the second stage, adjustments were made to account for nonresponding establishments whose insurance status was unknown. The adjustment cells for this stage were based on the sampling strata. For private establishments, the sampling strata were formed by cross-classifications of State, firm-size, and establishment size. For the public sector, the strata were formed by cross-classifications of State, type of government, and establishment size.
- In the third stage, the adjusted weights from the second stage were further adjusted to account for the nonresponding establishments whose insurance status was known. Insurance status was used with sampling strata to form adjustment cells in this stage. For the second and third stages, the adjustment factor was the ratio of the sum of the weights of eligible cases to the sum of the weights of the respondents.
- In the fourth stage, which was used primarily for the public sector, weights were adjusted to account for nonresponse among public sector entities selected with certainty.[41] The adjustment factor for this stage was calculated according to the number of employees at the establishment.

To avoid large adjustment factors or sparse adjustment cells at each stage of adjustment, some collapsing of nonresponse cells was performed. Although collapsing generally increases the potential for bias in the survey estimates, this procedure was intended to reduce the variances whereby the overall mean squared errors would be reduced.

The largest overall nonresponse adjustment factors were 2.02 in the private sector and 4.7 in the public sector.

''Weight trimming'' was used sparingly in NEHIS; however, in those few cases, it was needed primarily because of inaccurate measures of size used to assign some establishments to sampling strata. Specifically, when establishments were actually much larger than indicated on the NEHIS sample frame, the weight resulted in being much larger than weights of other establishments of the same size, and thus, conceivably could have dominated certain subgroup estimates.

Private sector establishment weights were trimmed in NEHIS when the weighted difference in the establishment size (i.e., frame size versus reported size) accounted for at least 8 percent of the estimated number of employees in the same State. For the public sector, weights were trimmed if the weighted difference in the establishment size accounted for at least 5 percent of the estimated number of employees in the State. The reported establishment size also had to be at least 10 times larger than the frame size. In the public sector, certainty cases were

[39]Plan weights were not further post stratified (beyond the establishment final weight post-stratification component) for lack of suitable population totals.

[40]There were a few government sample units that had no chance of selection because of a small mistake that occurred in the public sector sampling process.

[41]For a few private sector establishments (18 cases), a fourth nonresponse adjustment was used for cases whose result codes changed from complete to nonrespondent or ineligible during data processing (variable construction).

not eligible for trimming.

Weights were trimmed for four governments (all special districts) and 127 private establishments.[42] Adjustment factors for trimmed establishments ranged from 0.03 to 0.53 in the private sector, and from 0.08 to 0.15 in the public sector. Where weight trimming occurred, the assigned base weight was the same as if it had been in the stratum corresponding to the number of employees actually reported in the NEHIS interview.

A ''post-stratification adjustment'' was performed on private sector establishment weights so that NEHIS employee counts agreed with independent employment estimates provided by the U.S. Bureau of Labor Statistics. This adjustment was needed, in particular, to correct the NEHIS data for new establishments and their employees included on the U.S. Bureau of Labor Statistics data system but not included in the DMI file (14). This final adjustment was applied to 404 cells—formed by crossing State and the District of Columbia, two Standard Industry Classification (SIC) derived code categories (goods producing versus services), and four categories of establishment size. Four cells were collapsed with others, reducing the total number of cells from 408 to 404. As no exact control totals were available because of differences in reference periods, frame coverage, and definitions, universe counts obtained from the *Employment and Earnings Survey* (15) were increased to account for almost 8 million additional people included as employees in the NEHIS but not in the U.S. Bureau of Labor Statistics figures.[43] The cell post-stratification factors ranged from 0.4 to 2.1; and the national post-stratification factor was 0.99.

A post-stratification adjustment of public sector establishment weights is currently being considered, now that employment data are available from the 1992 Census of Governments and the 1993 Survey of Government Employment. Until recently no other adequate data sources were available that had sufficient detail and comparability to calibrate the NEHIS public sector data.

Plan weight

The first step for computing the plan sampling weight was to derive the ''base weight'' for the plan, defined as the inverse of the selection probability of the plan. It is the product of two component weights: The final weight of the establishment from which the plan was selected, and the plan subsampling weight. The plan subsampling weight is the inverse of the conditional probability of selecting the plan from the establishment, given that the establishment has been selected. This conditional probability includes components for subsampling the establishment and sampling the plan.

The largest plan subsampling weight was 114.0 in the private sector and 14.5 in the public sector. The minimum and maximum plan base weights for plans with complete data were, respectively, 1.20 and 15,022.02 for the private sector and 1.00 and 158.49 for the public sector.

The second step was to adjust the base weight for nonresponse. This ''nonresponse adjustment'' was made separately for fully insured plans and self insured plans,[44] and for each of these groups, performed in two stages. Plan nonresponse adjustment was performed separately for self-insured and fully insured plans because it was thought that this variable was highly correlated with survey responses.

- In the first stage (for each group), the base weight was adjusted to account for nonresponding plans where it was not known whether it was a self-insured or fully insured plan.
- In the second stage, the weights of the responding self-insured plans were adjusted to account for nonresponding self-insured plans, and the weights for the responding fully insured plans were adjusted to account for nonresponding fully insured plans.

The nonresponse adjustment factors ranged from 1 to 2.79 for plans in the private sector, and from 1 to 2.82 for plans in the public sector. The nonresponse adjusted weights from the plan nonresponse adjustment process ranged from 1.40 to 20,115.12 for plans in the private sector, and from 1 to 205.58 for plans in the public sector.

The final component for deriving the plan weight, ''weight trimming'', was performed on plans whose weights were determined to contribute disproportionately to the total weighted plan enrollment. The general approach used for trimming plans was to identify candidates for trimming and then review each case to determine an appropriate trimming factor, if any. The percentage contribution of an individual plan's weighted enrollment to the total weighted enrollment within each comparison

[42]NCHS discovered an anomaly in the private sector trimming process long after its completion. An analysis showed that rectification of the anomaly would have little effect on the private sector trimming process (e.g., few changes in the cases chosen for trimming). Hence, nothing was done.

[43]These included self-employed individuals with employees (U.S. Bureau of Labor Statistics figures counted employees of self-employed, but not the self-employed themselves); and those employees not covered by unemployment insurance (i.e., Washington State corporate executives and employees from several industry groups—mostly churches and railroads).

[44]A fully insured plan refers to a plan in which the financial risk of claims incurred by enrollees is assumed by a health insurance carrier. A self-insured plan is one in which a company or organization assumes the financial risk for medical claims incurred by their employees.

group was used to identify trimming candidates.

In the private sector, weight trimming was performed on 11 plans; in the public sector, 1 plan weight was trimmed. The trimming adjustment was determined separately for each case.

Weight for self-employed individuals with no employees

The SENE weight was the product of two components, a ''base weight'' and a ''nonresponse adjustment''. NEHIS adopted as the base weight, the final semiannual person weight from the National Health Interview Survey (NHIS) that was assigned to the SENE case. Although the NHIS base weight included a post-stratification factor, NEHIS did not further poststratify these cases because no control totals were available specifically for self-employed individuals with no other employees.

Nonresponse adjustments were then made to these base weights to account for NEHIS ineligible cases and nonrespondents; that is, original SENE sample cases whose eligibility for the NEHIS could not be determined and SENE's who were eligible but did not complete the NEHIS interview. The adjustment factor was the ratio of the sum of the weights of all sampled cases to the sum of the weights of the respondents and ineligible cases. The 217 adjustment cells were derived by crossing census region, type of primary sampling unit, and National Health Interview Survey sampling stratum.

The nonresponse adjustment factors used for the SENE's ranged from 1.00 to 1.925, with the resulting nonresponse-adjusted weights of 867 to 19,954.

See *Weighting and Estimation Procedures for the 1994 NEHIS* (16) and *National Employer Health Insurance Survey (NEHIS) Final Methodology Report: Volume I: Statistical Methodology* (17) for further details on the NEHIS weighting specifications.

Reliability of survey estimates

As in other surveys, the NEHIS results are subject to sampling and nonsampling errors. Because survey results are subject to both types of errors, the total error is larger than errors due to only sampling variability. Sampling error consists of the error in a survey estimate that is attributed to the fact that a sample, rather than a complete census, was used to compute the survey estimates. The probability design of NEHIS enables calculation of sampling errors. Nonsampling error includes errors due to response bias, questionnaire and item nonresponse, recording, and processing errors. It is important that all aspects of the NEHIS design be considered during the data analysis.

Nonsampling error

Although the magnitude of the NEHIS nonsampling errors cannot be computed, a variety of efforts and procedures were undertaken and built into the operation of the survey to keep these errors minimized. Methods employed in NEHIS to reduce nonsampling error included:

- Extensive interviewer training
- A standardized CATI questionnaire
- Monitoring of telephone interviews
- Use of ''most knowledgeable'' respondents
- Promoting use of employer-maintained records
- Follow-up interviews
- Manual and computer editing, and other data quality checks

Specific steps taken to reduce bias in the data are discussed in the ''Main data collection'' section. Quality control and consistency procedures and edit checks discussed in the ''Data processing'' section reduced errors in data coding and processing.

Sampling error

Because of the complex sample design used in NEHIS (stratification for the establishment sample and clustering for the plan subsample), traditional methods of statistical analysis based on the assumption of a simple random sample are not applicable. In fact, methods that ignore the stratification and other characteristics of the design are likely to yield results that are not only inaccurate but misleading. Generally, sampling variances will be underestimated if calculated without incorporating the complex sample design. And an important component that must be considered when analyzing data is the strata from the sample design used to estimate variances and test for statistical significance.

The effect of the complex sample design on variance estimates is referred to as the design effect (DEF), which is the ratio of the variance of a statistic from a complex sample to the variance of the same statistic from a simple random sample of the same size. A DEF of one indicates the equality of the simple random sample variance and the complex sample variance.

Westat, Inc. computed DEF's for four analytic variables for various subgroups: State, major industry, and private/public sector. The variables representing establishment and insurance plan data included:

- Enrolled employees as of December 1, 1993
- Percent of establishments (with insurance) offering coverage to retirees
- Percent of premiums for family coverage paid by employer
- Percent of employees enrolled in conventional, preferred provider organization and point of service plans whose coinsurance rate is 20 percent

Details of this analysis are described in another report (17).

Standard error approximations

The standard error is primarily a measure of the variability that occurs by chance because only a sample, rather than the entire universe, is surveyed. The standard error also reflects part of the measurement error, but it does not measure any systematic biases in the data. It is inversely proportional to the square root of the number of observations in the sample. As the sample size increases, the standard error generally decreases. Given a sufficient sample to approximate a normal distribution (about 30 cases), the chances are about 68 in 100 that an estimate from the sample differs by less than the standard error from the value that would be obtained from a complete census. The chances are about 95 in 100 that the estimate differs by less than 2 standard errors.

The standard errors for most NCHS published data from NEHIS are computed using SUDAAN software. SUDAAN computes standard errors by using a first-order Taylor series approximation of the derivation of estimates from their expected values. A description of the software and the approach it uses has been published (18).

Because computing a direct estimate of sampling error for every statistic is not always feasible, several generalized variance functions were derived for approximating standard errors of totals and percents for NEHIS establishment and employee estimates for the private sector. Graphical displays of these estimated standard errors are provided in appendix X. Separate variance functions were fit for each of these types of estimates and percents. Other details about these standard error approximations, including the methodology surrounding the regression models chosen and the equations derived, have been previously published (19).

Table G contains the *a* and *b* parameters for these equations by type of estimate. These statistics were specifically produced for NCHS' first analytic report from NEHIS (20).

For a percentage *p*, an approximate standard error, SE(*p*), may be computed using the formula

$$SE(p) = \frac{a\sqrt{p\,(100 - p)}}{(denominator)^b}$$

where

a, b are variance function parameters, given in **table G**; denominator is the denominator of the percentage.

For a total *x*, an approximate standard error, SE(*x*), may be computed using the formula

$$SE(x) = (ax^2 + bx)\ 2/3$$

where

a,b are variance function parameters, given in **table G**.

For establishment-related totals of 4.7 million or less, the variance function parameters given in **table G** should be used. However, for establishment-related totals of more than 4.7 million, a value of 20,000 should be used for the estimated standard error.

Sample weights also should be used when generating NEHIS estimates of totals, proportions, means, and other descriptive statistics. As previously described, they are needed for producing reasonable establishment and plan level estimates because each sampled business establishment and plan for NEHIS did not have an equal probability of selection. The sample weights incorporate these differential probabilities of selection and include adjustments for noncoverage and nonresponse.

Confidentiality

Assurance of confidentiality was provided to all establishments that participated in NEHIS. NCHS' confidentiality mandate, according to Section 308(d) of the Public Health Service Act (42 USC 242m), states that:

> No information, if an establishment or person supplying the information or described in it is identifiable, obtained in the course of activities undertaken or supported under section . . . 306, . . . may be used for any purpose other than the purpose for which it was supplied unless such establishment or person has consented (as determined under regulations of the Secretary) to its use for such other purpose and (1) in the case of information obtained in the course of health statistical or epidemiological activities under section . . . 306, such information may not be published or released in other form if the particular establishment or person supplying the information or described in it is identifiable unless such establishment or person has consented (as determined under regulations of the Secretary) to its publication or release in other form, . . . (21).

Therefore, all tabular data (published and unpublished) released from the survey are subject to adherence to NCHS-established confidentiality criteria. To prevent inadvertent disclosure of NEHIS respondents, the following two standard confidentiality procedures have been adopted for NEHIS released estimates:

- For frequency (or percentage) tables, a version of the *Threshold Rule* will be applied. This is simply a rule that identifies a cell as sensitive if it does not contain at least *n* respondents, where *n* is taken most often to be 3. For NCHS surveys, including NEHIS, *n*=3. In addition to the Threshold Rule, NCHS (e.g., NEHIS) defines a cell as sensitive if it is the only nonempty cell in a row (or column), regardless of the number of entries the cell has.

Table G. Parameters for approximate standard error equations for private sector establishment and employee estimates of percentages and totals

Type of estimate	Parameters for percents		Parameters for totals	
	a	*b*	*a*	*b*
Establishments (private sector)	2.298	0.345	−0.000000483[1]	2.878[1]
Employees (private sector)	3.651	0.313	−0.000000132	19.553

[1]These should not be used for establishment-related estimates of 4.7 million or more. Instead, a value of 20,000 should be used for the estimated standard error.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey. 1994.

- For magnitude tables (i.e., totals or means), to identify sensitive cells, NEHIS will apply the *(n,k) Rule* which involves the level of dominance of one establishment or more in terms of the cell estimate. The *(n,k) Rule* identifies a cell as sensitive if *n* or fewer respondents account for *k* percent or more of the cell total. The most common version of this rule, which is used by NCHS and will be adopted for NEHIS, takes *n*=1 and *k*=60 percent.

For cells found to be sensitive by either of these methods, NEHIS will either suppress the cell estimate at risk or revise the table by collapsing columns or rows to eliminate the sensitive cells.

Extensive efforts have also been invested to date to produce NEHIS public use microdata files that adhere to NCHS confidentiality guidelines, yet provide potential data users with information in sufficient detail to be useful for policy planning and research purposes. This task has been particularly challenging for NEHIS, because it is an establishment survey.

Disclosure problems are generally more difficult for establishment surveys, compared to household surveys, as there are fewer establishments than households, and because of the greater size variation and high skewness of employees among establishments (22). Protecting confidentiality is of particular concern for the larger establishments because they are often highly visible. In addition, an establishment could have high visibility if it were the only one of a specific type (i.e., Standard Industrial Classification code) within a geographic area or State. Furthermore, with the availability of similar data from many outside sources, there is the potential for matching public use file records to other external data files that have identification information. This is especially true for NEHIS, because the source of the sampling frame for the private sector is a commercially available file from Dun and Bradstreet. Other private files and government data bases containing health insurance data also exist that provide potential sources for matching cases. For reasons such as these, as reported in a major report on disclosure limitation by the Office of Management and Budget, ''there are virtually no public use microdata files released for establishment data'' (23).

Because a primary goal of NEHIS is to provide baseline data to help evaluate the impact of health care reform, and many of the health care reform initiatives are generated at the State level, high priority was given to providing a public use file with State identifiers. Regrettably, all approaches taken to construct NEHIS public use microdata files that meet NCHS confidentiality standards while providing information in sufficient detail to be useful to data users were unacceptable.

Data dissemination

Requests for additional information concerning this survey and the availability of NCHS products and services should be directed to the Data Dissemination Branch. This branch provides information about NCHS publications, NCHS information available on the Internet, electronic microdata files, and unpublished tabulations.

Data Dissemination Branch
National Center for Health Statistics
6525 Belcrest Road, Room 1064
Hyattsville, Maryland 20782-2003

Telephone: (301) 436–8500
E-mail: nchsquery@cdc.gov
Internet: www.cdc.gov/nchswww

The first report published by NCHS on NEHIS is *Employer-sponsored Health Insurance: State and National Estimates* (20), which is also available in pdf form through the NCHS Internet home page: www.cdc.gov/nchswww/products/pubs/pubd/other/miscpub/miscpub.htm. Appendix XI contains a list of other available NEHIS descriptive, analytical, and methodological papers. Several other NCHS reports and journal articles from NEHIS are in preparation. In addition, requests for special tabulations or calculations may be made. Assisted programming services are also available, whereby the data user may submit SAS code. The output will be reviewed by NCHS staff for disclosure avoidance, before it is provided to the requestor. Appendix III itemizes the analytic variables that are contained on the NEHIS data set. Before work begins on a request, fee will be agreed to based on the level of resources required. The minimum fee is $75. To make a request for special tabulations or for assisted

programming services, please write to:

Director, Division of Health Care Statistics
National Center for Health Statistics
6525 Belcrest Road, Room 952
Hyattsville, MD 20782-2003

References

1. Hing E, Euller R. Comparability of 1994 National Employer Health Insurance Survey estimates with other employer surveys. American Statistical Association proceedings from the section on Government statistics. Chicago, Illinois: Meeting of the American Statistical Association. August 1996.
2. Marker D, Bryant E, Moriarity C. National Employer Health Insurance Survey sample design, American Statistical Association proceedings from the section on survey research methods. 264–9. 1994.
3. Westat, Inc., National Employer Health Insurance Survey design. A project report submitted by Westat, Inc. to the National Center for Health Statistics. May 5, 1994.
4. Office of Management and Budget statistical policy working paper, 15. Quality in establishment surveys. OMB/PB88-23292. 1988.
5. Chapman D. Evaluation of sampling frames for the 1994 National Employer Health Insurance Survey. Contract 200-92-0510, Task order 41. Klemm Analysis Group, Inc. May 23, 1995.
6. Westat, Inc., National Employer Health Insurance Survey (NEHIS) Volume II: Methods Report—Instruments. Westat, Inc. 1997.
7. Allen K, Park C. Health insurance coverage of the self-employed with no employees: Estimates from the National Employer Health Insurance Survey, United States, 1993. In press.
8. Westat, Inc., National Employer Health Insurance Survey dress rehearsal report. Westat, Inc. 1994.
9. Westat, Inc., National Employer Health Insurance Survey (NEHIS) Volume III: Methods report—Data collection. Westat, Inc. 1997.
10. Westat, Inc., Report on data retrieval for missing critical variables. Westat, Inc. 1996.
11. Guadagno M. Quality assessment of the 1994 National Employer Health Insurance Survey: Retrospective cognitive interview with employers. Unpublished NCHS document. 1997.
12. Westat, Inc., National Employer Health Insurance Survey union data collection report. Westat, Inc. 1997.
13. Hing E, Poe G, Euller R. The effect of methodological differences in two surveys on estimates of the percent of employers sponsoring health insurance. Inquiry. In press.
14. Marker D, Yansaneh I, Croos J. National Employer Health Insurance Survey proposed methods for imputing variables. Westat, Inc., 1996.
15. U.S. Bureau of Labor Statistics. Employment and earning surveys; vol 117 no 3. U.S. Department of Labor. Washington: U.S. Government Printing Office. 1994.
16. Wallace L, Bryant E, Chapman D, et al. Weighting and estimation procedures for the 1994 NEHIS. American Statistical Association proceedings of the section on survey research methods. 192–7. 1995.
17. Marker D, Bryant E, Wallace L, Yansaneh I. National Employer Health Insurance Survey (NEHIS) final methodology report: Volume I: Statistical methodology. Westat, Inc. 1996.
18. Shah BV, Barnwell BG, Bieler GS. SUDAAN User's Manual, Release 7.0. Research Triangle Park, North Carolina: Research Triangle Institute. 1996.
19. Moriarity C, Gousen S, Chapman D. Generalized variance functions for the 1994 National Employer Health Insurance Survey. American Statistical Association proceedings from the section on survey research methods. 852–7. 1997.
20. National Center for Health Statistics. NEHIS Project Staff. Employer-sponsored health insurance: State and national estimates. Hyattsville, Maryland. 1997.
21. U.S. Department of Health and Human Services. NCHS staff manual on confidentiality. DHHS/PHS/NCHS. 1984.
22. Chapman D. Recommendations for disclosure avoidance for the National Employer Health Insurance Survey. Klemm Analysis Group, Inc. Contract 200-92-0510, Task order 10. 1995.
23. Office of Management and Budget. Statistical policy working paper 22: Report on statistical disclosure limitation methodology. Subcommittee on disclosure limitation methodology. Federal Committee on Statistical Methodology. 1994.

Appendix I

National Employer Health Insurance Survey glossary

Definition of terms

Active employee—For the National Employer Health Insurance Survey (NEHIS), an active employee is one who was employed, full or part time, by the sample business or government on December 31, 1993, regardless of whether the employee was considered permanent, temporary, or seasonal. The active employee need not have been at work on that date. Included would be persons on vacation or out sick or whose normal working hours did not include December 31. Excluded would be persons who were retired, were laid off, or otherwise had left employment before December 31, or who were hired after that date.

Computer-assisted telephone interview (CATI)—The main method of data collection used in the survey.

Chapter/Subchapter S corporation—A corporation that has fewer than 15 stockholders, operating as a partnership for tax purposes.

Claims—A request made by a covered person to an insurer for reimbursement of health care expenses or payment of health care bills. The request or claim may also be submitted by the medical provider. ''Paid claims'' may be used to mean the same thing as benefits paid.

COBRA—The Consolidated Omnibus Budget Reconciliation Act of 1985. Part of this law requires employers to continue offering health coverage for employees and their dependents for 18 months, and 36 months in some cases, after they leave the firm. Typically, the employee pays all of the monthly premium when covered by COBRA.

COG—Census of Governments, a census of government units conducted every five years by the U.S. Bureau of the Census. The 1992 Census of Governments was the sampling frame for the sample of local governments. The 1987 COG measure of size was used in the sampling process.

Coinsurance—A cost-sharing requirement that requires the enrollees to pay a certain percentage of the cost of covered services (after any required deductible has been paid). For example, an employee may be required to pay 20 percent, and the health plan pays the remaining 80 percent of the cost of medical care, up to a certain maximum out-of-pocket expense.

Commercial insurer—A private, for-profit insurer such as Aetna, Travelers, or Prudential. Blue Cross/Blue Shield organizations not considered commercial insurers because they are nonprofit.

Composite premium (equivalent)—The premium (equivalent) is a fixed-dollar amount regardless of whether the enrollee has single or family coverage.

Conventional health insurance—See ''Health insurance plan types'' section.

Copayment— A copayment is a fixed-dollar amount that an enrollee in a health plan must pay for certain services. Managed care plans often require a copayment of $5 or $10 for each doctor visit.

Corporation—A body authorized by law to act as a single person. A corporation, not its owners or its stockholders, is responsible for its own debts. Companies of all types, including self-employed individuals, can be corporations.

Cost sharing—Provisions of a health care plan that require the enrollees to pay some of the costs of covered services. The most common cost-sharing mechanisms are deductibles and coinsurance.

Covered services—The medical or other services (hospital stays, surgery, doctor visits, diagnostic tests, prescription drugs, medical supplies, home health care, etc.) received by an enrollee for which a plan will pay all or part of the costs (subject to cost-sharing provisions). The definitions of covered services may be very detailed so as to include some and exclude other closely related services. Services may be covered or not depending on the reason for which they were obtained; for example, plastic surgery may only be covered for disfigurement due to accidental injury.

Deductible—The fixed-dollar amount an employee must pay for medical services before any part of medical bills are reimbursed by the health plan during a plan year. Once the covered person has met the deductible, the amount the plan pays from then on may be reduced by coinsurance.

DMI—Dun's Market Identifiers, Dun and Bradstreet Corporation's list of businesses used as the sampling frame for the sample of private business establishments with at least one employee in addition to the owner.

Employer-sponsored health insurance—Health insurance received as a result of employment. This includes coverage for active employees, retirees, and former employees covered under COBRA, and their dependents. The employer may pay all, part, or none of the premium for this coverage.

Establishment—An economic unit, generally at a single physical location, where business is conducted or where services or

industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one establishment or more.

Family coverage—A health plan that covers the employee and one or more members of his/her immediate family (spouse and children). Almost any kind of health insurance may offer family coverage.

Fee-for-service—A method of reimbursement in which a medical provider charges a fee for each medical service provided. Other methods of reimbursing medical providers include prepaid fees, retainers, ''capitation'' (per-person fees), salary, and other contract arrangements. Conventional health insurance plans typically reimburse health care providers on a fee-for-service basis.

Flexible spending account—An account that employees pay pretax dollars into and that can be used to purchase health insurance or other benefits such as day care. Typically, money in these accounts is not subject to Federal income tax. These accounts may be funded through salary reduction, employer contribution, or both.

For-profit organization—Any business or farm that is intended to operate at a profit, even if that business has been operating at a loss.

Fringe benefits—Benefits offered through employment that may include paid holidays and vacations, sick leave, disability insurance, retirement plans, and health and life insurance benefits.

Fully insured health insurance plan—A plan in which the financial risk of claims incurred by enrollees is assumed by a health insurance carrier.

Geographic region—For the purpose of classifying data by geographic area, the States are grouped into regions and census divisions.

The regions, which correspond to those used by the U.S. Bureau of the Census, are as follows:

Region

Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania.
Midwest	Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska.
South	Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Oklahoma, Arkansas, and Texas.
West	Washington, Oregon, California, Nevada, New Mexico, Arizona, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii.

The census divisions, which correspond to those used by the U.S. Bureau of the Census, are as follows:

Division

New England	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.
Middle Atlantic	New York, New Jersey, and Pennsylvania.
East North Central	Ohio, Indiana, Illinois, Michigan, and Wisconsin.
West North Central	Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.
South Atlantic	Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.
East South Central	Kentucky, Tennessee, Alabama, and Mississippi.
West South Central	Arkansas, Louisiana, Oklahoma, and Texas.
Mountain	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.
Pacific	Washington, Oregon, California, Alaska, and Hawaii.

Government—Federal, State, and local governments, including counties, municipalities, and townships, as well as public schools, public hospitals and public universities. Governments were not separated by location.

Group health insurance policy—A contract between an organization and a health insurance company that allows the organization's members or employees to purchase health insurance coverage with benefits and at rates specified in the contract. Group health insurance is typically less expensive for the same benefits than individually purchased policies.

Health maintainance organization (HMO)—See ''Health insurance plan types'' section.

Inpatient hospital care—Care received in a hospital setting and requiring admission to the hospital.

Major health insurance plan—A health insurance plan that typically pays for hospitalization costs, doctor visits, and diagnostic tests. Conventional/indemnity, health maintenance organizations (HMO), preferred provider organizations (PPO), and point-of-service (POS) plans are comprehensive health insurance plans.

Managed care—A system that, in varying degrees, integrates the financing and delivery of medical care through contracts with selected physicians and hospitals that provide comprehensive health care services to enrolled members for a predetermined monthly premium. The term encompasses health

maintenance organizations (HMO's), preferred-provider organizations (PPO's), and point-of-service (POS) financing and delivery systems.

Mega multiestablishment firm—A firm with more than 10 sampled establishments.

Multiestablishment firm (MEF)—An organization or company with more than one sampled location. Operationally, the multiple locations are sometimes treated as one case, because information pertaining to all sample locations is often obtained from one respondent or more at a headquarters location.

Metropolitan statistical area (MA)—An MA, generally speaking, consists of a county or group of counties containing at least one city (or twin cities) having a population of 50,000 or more and adjacent counties that are metropolitan in character and are economically and socially integrated with the central city. In New England, towns and cities rather than counties are the units used in defining MA's. There is no limit to the number of adjacent counties included in the MA as long as they are integrated with the central city, nor is an MA limited to a single State; boundaries may cross State lines. The metropolitan population is based on MA's as defined in the 1980 census and does not include any subsequent additions or changes. The definition and titles of MA's are established by the U.S. Office of Management and Budget with the advice of the Federal Committee on Metropolitan Statistical Areas.

Minimum premium plan (MPP)—An insurance arrangement in which the insurer pays for most or all claims out of a trust established by the employer. The employer pays the insurance company a monthly fee for administrative services and insurance for claims above a certain amount. (For NEHIS purposes, an employer with such an arrangement would be considered to be self-insured and to have purchased stop-loss coverage.)

Multiple employer trust (MET), Multiple employer welfare arrangement (MEWA), Taft-Hartley Trust—A MET is a group of employers who purchase health insurance together to increase the size of the risk pool and lower premiums. A MEWA is a group of employers who together purchase health insurance or self insure to increase the size of the risk pool and lower premiums and are subject to the Employment Retirement Income Security Act (ERISA). A Taft-Hartley Trust involves union locals that have members working for multiple employers that organize a trust, with a board of trustees including both employers and union members, that manages the health and welfare plans for the union members.

Nonmetropolitan statistical areas (Not an MA)—An area that includes all "other" places in the country.

Nonpreferred provider—A physician who is not a member of a health plan's physician network. Employees covered by plans with preferred providers generally pay more for services from a nonpreferred provider.

Nonprofit organization—A private charitable or other tax-exempt institution, such as a church, union, foundation, or private school.

Open enrollment—A period when employees may change health insurance plans or may elect coverage that they had previously declined. Such periods may occur for an individual at the time of employment and at some regular interval (annually, for example) for all employees.

Outpatient care—When an employee receives outpatient care, he or she does not spend the night in a hospital. This may also be called ambulatory care.

Partnership—An organization owned by two individuals or more who share the profits and responsibilities of the organization.

Payroll—Total wages and salaries of hourly and salaried workers before payroll deductions. This includes premium pay for overtime and for work on weekends and holidays, as well as commissions, bonuses, and pay for vacation or sick days.

Personal service contracts—These are individuals who are not on the payroll of an organization but who perform regular duties. They are generally paid based on the terms of a contract and their length of employment is for a specific period. Examples include free-lance editors and event coordinators. In NEHIS, these persons are not considered employees.

Point-of-service (POS) plans—See "Health insurance plan types" section.

Preexisting condition limitation—Restricts coverage for medical or health conditions that exist before enrollment in a health plan. Preexisting conditions may be excluded from coverage, or employees may have to wait a specified length of time before medical care related to their preexisting condition is covered by the health plan.

Preferred (participating) provider—A physician who is a member of a health plan's physician network. Employees generally pay less or nothing for services from a preferred provider.

Preferred provider organization (PPO)—See "Health insurance plan types" section.

Premium—The amount a person or an employer pays to an insurance company, HMO, or other insurer for coverage. For NEHIS purposes the monthly premium per covered employee and the "total annual" premium paid by the employer are used.

Premium equivalent—For self-insured plans, this is defined as the cost per covered employee, or the amount the firm would expect to pay in premiums if it was insured by someone else. The premium equivalent is equal to the amount of claims, administration, and stop-loss premiums for a self-insured plan.

Prescreening—Survey operation that verified the existence of each sampled establishment and the name and address of each existing establishment. This operation also identified the most appropriate NEHIS respondent to whom an advance letter was mailed.

Purchasing units (PU)—Multiple government units that jointly purchase health insurance for their employees.

Reinsurance—The acceptance by one insurer or more, called reinsurer, of a portion of the risk underwritten by another insurer who initially contracted for the entire risk or by a self-insured firm.

Seasonal employees—Employees who are hired for short periods, such as a season, usually in an industry that experiences extreme highs and lows in demand for labor, such as harvesting, landscaping, or resort activities.

Single establishment firm (SEF)—An organization or company with just one sampled location.

Self-insured—A company or government is self insured when the financial risk for medical claims is assumed partially or entirely by the organization itself. Partially insured organizations commonly purchase a stop-loss plan from an insurer who agrees to bear the risk (or stop the loss) for those expenses exceeding a predetermined dollar amount.

Self-insured health insurance plan—A plan in which the financial risk for claims incurred by enrollees is assumed by a company or organization.

Self-employed individual with no employees (SENE)—These respondents were drawn from the 1993 National Health Interview Survey, a household population survey. This sample together with the DMI and COG samples covered all public and private employers in the United States.

Single service health plan—A health insurance plan in which only specific services (e.g., dental or vision care) or a specific benefit (e.g., prescription drugs) are covered. See also ''single service plans'' section.

Sole proprietorship—An organization owned by a single individual who is personally liable for the debts and obligations of the organization.

Stop-loss coverage—A form of reinsurance for self-insured firms that limits the amount the firm will have to pay for each person's health care or for the total health expenses of the firm.

Temporary employees—Workers hired by a company to work for the company but are not considered permanent. These are not workers hired through a temporary agency, such as Kelly Temporary Services or Manpower.

Third party administrator (TPA)—An individual or firm hired by a company to handle claims processing, pay providers, and manage other functions related to the operation of health insurance. TPA is not the policyholder or the insurer.

Health insurance plan types

Health maintenance organization (HMO) (including exclusive provider organization)—An HMO offers comprehensive health care from a specified set of providers, who may be employees or under contract to the HMO. Care from providers outside the HMO is only covered in emergencies or when the patient is referred by an HMO provider.

If the providers (physicians and nonphysician providers) are employees of the HMO, the arrangement is called a ''staff-model'' HMO. If the providers are within one independent group practice, the arrangement is called a ''group model.'' If the providers are organized within two independent group practices or more, the arrangement is referred to as a ''network.'' If the providers are independent practices, the arrangement is called an independent practice association (IPA). An exclusive provider organization (EPO) is classified as an HMO.

Conventional health insurance—Under conventional health insurance, the covered person seeks care from his/her own choice of providers on a fee-for-service basis. Either the patient or the provider then submits a claim. Conventional health insurance plans may add ''PPO riders''; these plans are classified as PPO plans.

Preferred provider organization (PPO)—In a PPO the covered person may seek care from a provider associated with the plan (preferred provider) or a provider outside the plan (nonpreferred provider), but the plan makes no provision to couple a patient with a primary care doctor or gatekeeper. Typically, the patient pays more when she/he sees a nonpreferred provider.

Point-of-service (POS) plans—This plan offers covered persons the freedom to seek care from providers outside the plan, but he/she pays substantially more out of pocket for such care. Enrolled persons in POS plans have incentives (usually more benefits or lower copayments) to use network providers in the plan. POS plans also encourage covered persons to use plan providers by coupling patients with a primary care doctor or gatekeeper. POS plans include open-ended HMO's or PPO's and other variations of managed care plans. (See definition for managed care.)

Single service plans

Dental insurance (Dental only plan)—A dental only plan covers only dental care, including checkups, cleaning, and fillings, as well as more involved procedures.

Vision care plan—A vision care plan covers only eye examinations, eye care, and eyeglasses.

Prescription drug plan—A prescription drug plan covers only drugs prescribed by a physician. The plan may have copayments or a deductible. It may require covered persons to use particular pharmacies or a mail-order drug service.

Special plans

Long-term care insurance—Long-term care insurance covers all forms of care, both institutional and noninstitutional, required by people with chronic health conditions.

Dread disease plan (e.g., cancer plan, stroke plan)—Dread disease plans cover only medical services associated with a particular physical condition and usually pay a set amount per day.

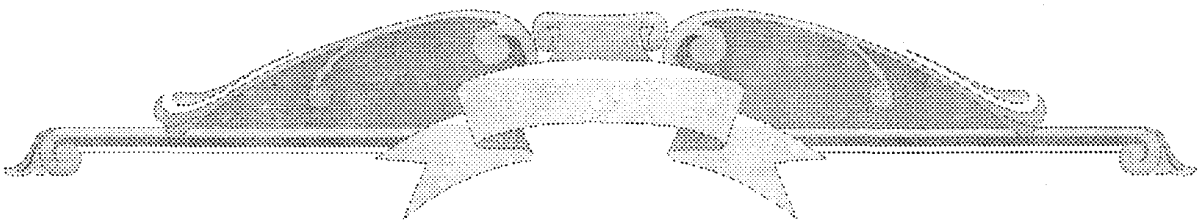
Extra cash plan (hospital indemnity insurance)—Extra cash plans typically pay the covered person a set amount per day when she/he is hospitalized. They do not specifically cover the costs of any health care services.

Other kinds of plans

Administrative plan (Administrative services only (ASO) or Administrative service contract (ASC))—In an administrative plan, the employer purchases from a commercial carrier or Blue Cross/Blue Shield services such as claims adjudication, member services, and management information reporting. Usually, the employer bears the full risk of the cost of health claims (other than that covered by a separate stop-loss arrangement).

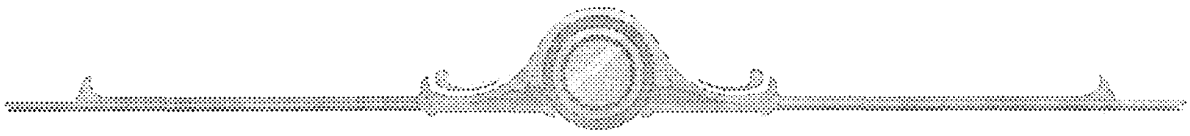
Administrative plans are not considered health insurance for NEHIS, although they may be associated with self-insured health plans that should be included.

Voucher (stipend)—An employer agrees to pay a specific amount toward an employee's health insurance. The employee is responsible for obtaining his/her own health insurance policy.



1994 National Employer Health Insurance Survey

Self Administered Questionnaires



Dear Data User:

This document includes two self administered questionnaires (SAQ's) that were used in the 1994 National Employer Health Insurance Survey (NEHIS) by employers who were unable to complete the interview using the primary mode of data collection, Computer Assisted Telephone Interviewing (CATI), or who preferred to complete a mail questionnaire. The first questionnaire , the Establishment Questionnaire, contains questions about the characteristics of the establishment and the employees that work there, for example, whether or not the establishment offers health insurance, other company locations, number of full time, part time, temporary and seasonal employees, eligibility requirements, enrollment, and number and types (HMO, PPO, Conventional) of plans offered. The Plan Questionnaire obtains detailed information, such as premiums, deductibles, coinsurance rates, and services covered, for each plan offered by the establishment.

Efforts were made to design the NEHIS SAQ in such a way as to maximize response and to minimize respondent burden. Therefore, these questionnaires are missing a few data items that are contained in the NEHIS CATI questionnaire and do not include most of the probe or follow-up questions . The NEHIS SAQ, however, is complete in the sense that it contains the main data items from the NEHIS CATI questionnaire that are analytically relevant to health care researchers and policy makers.

The NEHIS Staff

OMB No: 0920-0341; Approval Expires: December 31, 1994

National Employer Health Insurance Survey

conducted for

The United States Department of Health and Human Services

Establishment Questionnaire

Please answer each of the questions that apply to this location. This Establishment Questionnaire has questions about the business establishment or location of your organization. Also enclosed are several Plan Questionnaires. Please complete the Establishment Questionnaire and a Plan Questionnaire for each health insurance plan your company or organization offered at the location below as of the most recent plan year ending before April 1, 1994.

Instructions are in shaded boxes like this. Explanations of the questions are in italics. Instructions for returning the questionnaire are on the back of this booklet.

Please answer questions in this questionnaire for the location shown below:

A. Offering Health Benefits to Employees

A1.	**Did your organization or business offer a group health insurance plan for employees at the location on the label as of December 31, 1993?** *Answer "Yes" even if you offered a group health insurance plan only to some employees.*	Yes | | No | |

A2.	**Did any of your employees receive health insurance coverage through a union as of December 31, 1993?** *Do not include any employees who may have been covered by their spouses' union plans.*	Yes | | No | |
	If "Yes" to A2:	
A3.	**Did your organization or business contribute to this coverage?**	Yes | | No | |

A4.	**Did any of your employees receive health insurance coverage through a professional or trade association as of December 31, 1993?** *Do not include any employees who may have been covered by their spouses' union plans.*	Yes | | No | |
	If "Yes" to A4:	
A5.	**Did your organization or business contribute to this coverage?**	Yes | | No | |

*If you answered "Yes" to A1, A3, **OR** A5, your business or organization is considered as offering health benefits to employees.*

If you answered "No" to A3 or A5, please enter the information requested for the the union or association below. Please provide infromation for other organizations on a separate sheet.

Name of union or association:

Name of contact person:

Address:

Telephone Number: ( ) -

Number of employees at this location covered by this group:

If your busines or organization does not offer health benefits to employees, please answer question A5. Otherwise, go on to Section B.

A5. Has your business or organization offered health insurance as a benefit to employees in the past five years?	Yes | | No | |
If "Yes" to A5: **A6. When did you last offer a health insurance benefit?**	**Month:** **Year:**

If the date in A6 is May 1993 or later, please answer the remaining questions about your health benefits as of that date.

Please go on to Section B.

B. Locations and Employees Nationwide

B1.	**Does your company or organization have branches or locations in the United States other than the one shown on the label?**	Yes | | No | |

If "No" to B1, GO TO SECTION C. Otherwise, please continue with Section B.

B2.	**Including the location shown on the label, how many branches or locations did your business or organization have . . .** **a. nationwide (in the United States)?** **b. in the state shown on the label?**	

B3.	**Including those at the location shown on the label, at the end of 1993 how many employees did your business or organization have ...** **a. nationwide (in the United States)?** **b. in the state shown on the label?**	

B4.	**Is your business or organization . . .**	**for profit?** | | **not for profit?** | |
	If "for profit": **B4a. What kind of ownership does your business have?**	**Corporation** | | **S Corporation** | | **Partnership** | | **Sole proprietorship** | | **Other (What?)** | |

B5.	**How long has your company or organization been in existence?** *Enter either a number of years or the year your business or organization started.*	**Years:** **Since**

C. Employees at Location

C1.	**What was the total number of employees on December 31, 1993, at the location on the label on the front of the questionnaire?** *Include all full- and part-time employees as well as the owner, if he or she works at this location. Include all employees on the payroll from this location as of December 31, 1993, but do not include persons working under personal service contracts or hired from a temporary agency such as Kelly Services.*	employees

If the answer to any question below is "None," enter "0."	Full-time	Part-time
C2a. **How many of the employees in C1 were considered full-time, and how many part-time?**		
C2b. **How many of these full-time and part-time employees were *eligible* for health benefits through your company or organization as of December 31, 1993?**		
C2c. **How many of these full-time and part-time employees were actually *enrolled* in a health insurance plan through your company or organization?**		
C2d. **How many of these full-time and part-time employees were considered *temporary* or *seasonal* on December 31, 1993?** *Temporary or seasonal employees are those hired on a short-term basis, but do not include those employed by an agency such as Manpower.*		
C2e. **How many of these temporary or seasonal employees were *eligible* for health benefits through your company or organization as of December 31, 1993?**		
C2f. **How many of these temporary or seasonal employees were actually *enrolled* in a health insurance plan through your company or organization?**		

C3.	**How many hours per week does an employee have to work to be considered full-time?**	hours/week

C4.	**How many of your employees at this location were union members as of December 31, 1993?** *You may enter either a number of employees or a percentage. If none, please enter "0."*	Number: OR percent

		Hourly	Salaried
C5a.	**Please enter the number of hourly (wage) and salaried employees as of December 31, 1993.** *Count employees on commission as salaried. Count those earning wages plus tips as hourly.* **In each column, please enter the number of employees in that category who earned . . .**		
C5b.	**Less than $5.00 per hour or less than $10,000 per year.** *Comparable rates are $200 per week or $800 per month.*		
C5c.	**at least $5.00 but less than $15.00 per hour, or at least $10,000 but less than $30,000 per year?** *Comparable rates are $200-$600 per week and $800-$2400 per month.*		
C5d.	**$15.00 per hour or more, or $30,000 per year or more?** *Comparable rates are $600 per week or more and $2400 per month or more.*		

C6.	**What was the total annual payroll for 1993 for this location including both hourly and salaried workers?**	$
	C6a. Was that for the calendar year, the fiscal year, or for some other period?	Calendar year | | Fiscal year | | Other period | |-> What?

C7.	**In 1993, how much did your company or organization spend on all your health insurance plans for this location?** *Please include all premiums (including employee contributions) and claims your company paid for all employees, as well as for any former employees or retirees that were covered. Please also include premiums paid by employees and any other costs such as administrative costs, stop-loss coverage or reinsurance. You may enter either a dollar amount or a percentage of total payroll.*	$ OR (percent of payroll)

D. Eligibility for Health Plan

If your company or organization did not offer health benefits, please skip to the last page of this questionnaire.

D1.	**As of December 31, 1993, did new employees have to work for a certain length of time before they became eligible for your health insurance plan?** *Do not include a waiting period your plan may have had for pre-existing conditions.*	Yes | | No | |
	If "Yes" to D1: **D2. What was this waiting period?** *Please enter a number of days, weeks, or months, or check a box if the waiting period varied or was the first day of the next month or pay period.*	Days: Weeks: Months: Varied | | First day of next month or pay period | |

D3.	**Did employees have to work a certain number of hours per week, per month, or per year to be eligible for your health insurance plan?**	Yes | | No | |
	If "Yes" to D3: **D4. How many hours?** *Enter the number of hours next to the appropriate period.*	**per week:** **per month:** **per year:**

D5.	**Were retirees *65 or older eligible* for your health insurance coverage other than through COBRA or other continuation of benefits laws?**	Yes | | No | |

D6.	**Were retirees *under 65 eligible* for your health insurance coverage other than through COBRA or other continuation of benefits laws?**	Yes | | No | |

D7.	**In what month does your health insurance plan year . . .** *The beginning of the plan year is the beginning of the period when the plan calculates deductibles and other benefits. It may also be the time, just after "open season," when an employee can change plans or elect coverage previously declined.*	begin? end?

The "plan year" that the questionnaire will ask about is the most recent plan year that ended before April 1, 1994. For example, if your plan year is the same as the calendar year, the "plan year" is January 1, 1993, through December 31, 1993. If your plan year begins in July and ends in June, the questionnaire plan year is July 1, 1992, through June 30, 1993. If your plan year begins in October and ends in September, the questionnaire plan year is October 1, 1992, through September 30, 1993. The questions below call this period "plan year 1993."

	If your plan year is not the same as the calendar year:	
D8.	**How many employees did your company or organization have at this location on the last day of plan year 1993?**	

D9.	**At the end of plan year 1993, did your company or organization offer employees ...**		
	a.	**paid vacation?**	Yes | | No | |
	b.	**paid sick leave?**	Yes | | No | |
	c.	**long-term disability insurance?**	Yes | | No | |
	d.	**life insurance?**	Yes | | No | |
	e.	**a retirement or pension plan such as a 401K or 403B plan?**	Yes | | No | |
	f.	**a flexible spending account?** *(That is, an account in which employees use pretax dollars to pay their share of health insurance costs or to buy other benefits. A flexible spending account may be offered along with a "cafeteria plan," but is not the same thing.)*	Yes | | No | |

E. Health Insurance Plans

Please list below all health insurance plans your company or organization offered in plan year 1993. Please include:

- all HMO, PPO, or conventional health insurance plans;
- each high and low option plan separately;
- any plans that cover just dental care, vision care, or prescription drugs;
- any plans employees obtain through a union or through a professional or trade association;
- any plan that you may obtain through a multi-employer trust (MET), multi-employer welfare association (MEWA), or other pooling arrangement.

List of plans offered in plan year 1993. If you offered more than 10 plans, please include additional plan names on a separate sheet.

Plan 1. _____

Plan 2. _____

Plan 3. _____

Plan 4. _____

Plan 5. _____

Plan 6. _____

Plan 7. _____

Plan 8. _____

Plan 9. _____

Plan 10. _____

Please write the name of each plan you offered in plan year 1993 on the cover of a Plan Questionnaire and complete the questionnaire for that plan. Shown on the next page are the definitions of the different kinds of health insurance plans for question F1 of the Plan Questionnaire.

Plan Type Definitions for Question F1 on Plan Questionnaire

1. **Health Maintenance Organization (HMO) or Exclusive Provider Organization (EPO).** An HMO offers comprehensive health care from a specified set of providers, who may be employees of or under contract to the HMO. Care from providers outside the HMO is only covered in emergencies or when the patient is referred by an HMO provider.

2. **Preferred Provider Organization (PPO).** In a PPO, the covered person may seek care from a provider associated with the plan (preferred provider) or a provider outside the plan (non-preferred provider). Typically, the patient pays more when s/he sees a non-preferred provider.

3. **Conventional Health Insurance.** Under conventional health insurance, the covered person seeks care from his/her own choice of providers on a fee-for-service basis. Either the patient or the provider then submits a claim.

4. **"Combination Plans" (Including, Point-of Service HMO, POS, or Open-ended HMO).** A "combination plan" has elements of an HMO and of a PPO or conventional plan. Plan benefits are greater if members choose providers within the HMO or PPO.

5. **Dental Insurance (Dental Only Plan).** A dental only plan covers only dental care, including checkups, cleaning, and fillings, as well as more involved procedures.

6. **Vision Care Plan.** A vision care plan covers only eye examinations, eye care, and eyeglasses.

7. **Prescription Drug Plan**A prescription drug plan covers only drugs prescribed by a physician. The plan may have co-payments or a deductible. It may require covered persons to use particular pharmacies or a mail-order drug service.

8. **Long-term Care Insurance.** Long-term care insurance covers all forms of care, both institutional and noninstitutional, required by people with chronic health conditions.

9. **Dread Disease Plan (Cancer Plan, Stroke Plan).** Dread disease plans cover only medical services associated with a particular condition and usually pay a set amount per day.

10. **Extra Cash Plan (Hospital Indemnity Insurance).** Extra cash plans typically pay the covered person a set amount per day when s/he is hospitalized. They do not specifically cover the costs of any health care services.

The following kinds of insurance are not counted for this survey. Please do not list them or complete plan questionnaires for them.

A. **Administrative Plan (Administrative Services Only (ASO) or Administrative Services Contract (ASC)).** In an administrative plan, the employer purchases from a commercial carrier or Blue Cross/Blue Shield services such as claims adjudication, member services, and management information reporting. Usually the employer bears the full risk of the cost of health claims (other than that covered by a separate stop-loss arrangement).

B. **Disability Insurance.** Disability insurance pays all or a part of an employee's salary (and possibly medical care costs) if the employee becomes unable to work due to physical or mental disability.

C. **Life Insurance.** Life insurance pays a cash benefit in the event of the covered person's death (or serious injury, in some cases).

OMB No: 0920-0341; Approval Expires: December 31, 1994

National Employer Health Insurance Survey

conducted for

The United States Department of Health and Human Services

Plan Questionnaire

Please complete a Plan Questionnaire for each health insurance plan your company or organization offered at the location below as of the most recent plan year ending before April 1, 1994.

Instructions are in shaded boxes like this. Explanations of the questions are in italics. Instructions for returning the questionnaire are on the back of this booklet.

Please answer questions in this questionnaire for the location shown below:

Name of Health Insurance Plan:

F. Plan Costs and Enrollment

Please complete this Plan Questionnaire for the plan shown on the cover.

F1.	**What kind of plan is it?** *Please mark one box only. See definitions in Section E of the Establishment Questionnaire.*	HMO |__| PPO |__| Conventional plan |__| Combination plan |__| Dental only plan |__| Vision only plan |__| Prescription plan |__|

If your company or organization has only one location, please skip to Question F3.

F2.	**The next question is about the number of employees and other persons enrolled in this plan as of the end of the plan year. We would prefer you answer for the location on the label on the cover of the Establishment Questionnaire. Please mark whether you can report the number of employees enrolled for this location only, only for the firm as a whole, or only for some other group of locations.**	This location |__| Firm as a whole |__| Some other group |__|

F3.	**How many people were enrolled in this plan (at this location) as of the end of the plan year in the following categories:** *(that is, at the end of the most recent plan year that ended before April 1, 1994) If none, enter "0."*	
	a. employees?	_____
	b. dependents of employees?	_____
	c. former employees covered through COBRA, or state continuation of benefits laws?	_____
	d. dependents of former employees?	_____
	e. retirees *65 or older*?	_____
	f. retirees *under 65?*	_____
	g. dependents of retirees?	_____

F4.	**Did this plan offer family coverage?**	Yes |__| No |__|

F5.	**Were you self-insured for this plan, or were you fully insured by the insurance company that wrote the plan?** *If you were self-insured, it means that your company or organization would bear the financial responsibility for employees' medical claims.*	Self-insured |__| Fully insured |__| Don't know |__|

If your company or organization has only one location, please check here |__| *and skip to the next Instruction Box.*

F6.	**The next question is about the total costs or premiums for this plan in the last plan year. We would prefer you answer for the location on the mailing label. Please mark whether you can report the total costs or premiums for this location only, only for the firm as a whole, or only for some other group of locations.**	This location |__| Firm as a whole |__| Some other group |__|

If you answered "Self-insured" in Question F5, please go on with Question F7. If you answered "Fully insured" or "Don't know" in Question F5, please skip to Question F15.

	Self-insured plans only:	
F7.	**What were the following costs for this plan in the most recent plan year that ended before April 1, 1994?**	*Please record below the appropriate costs* ***for the entire plan year.***
	a. total annual premiums (for the company or location, not per employee) for stop-loss coverage or reinsurance? *Stop-loss coverage protects self-insured firms from very large claims for an individual, or a large amount of total claims. If your plan did not have stop-loss coverage in this plan year, enter "0."*	$_____ (premium for stop-loss)
	b. benefits paid for claims incurrred in the plan year?	$_____ (benefits)
	c. administration or claims processing costs?	$_____ (administrative costs)
	d. total plan costs including all above costs?	$_____ (total plan costs)

	Self-insured plans only:	
F8.	**Who administered this plan in the most recent plan year ending before April 1, 1994?**	Blue Cross/Blue Shield |__| An insurance company |__| A third party administrator (TPA) |__| Your own firm |__| Someone else |__|-> Who?_____

	Self-insured plans only:	
F9.	**Did your company or organization calculate a "premium equivalent," or cost per covered employee, in the most recent plan year that ended before April 1, 1994?** *For self-insured firms, a "premium equivalent" is the amount the firm would expect to pay if it was insured by someone else. The premium equivalent is usually equal to the amount of claims, administration costs, and stop-loss premiums on a per-employee basis.*	Yes |__| No |__|
	If "No" to Question F9: **How much did employees contribute for . . .**	
	a. single coverage?	$_____per month
	b. family coverage?	$_____per month

If you answered "No" or "Don't know" to Question F9, please skip to the Benefits section (Section G).
If you answered "Yes" to Question F9, please go on with Question F10.

F10.	**In the most recent plan year that ended before April 1, 1994, did the premium equivalent include the costs of processing claims, or did it cover medical claims only?**	Included processing |__| Medical claims only |__|

F11a.	**What was the premium equivalent (for single coverage) per employee per month?**	$_____ per month
F11b.	**What part of the premium equivalent (for single coverage) was contributed by the *employee*?**	$_____ per month OR _____ percent
F11c.	**What part of the premium equivalent (for single coverage) was contributed by the *employer*?**	$_____ per month OR _____ percent

If this plan did not offer family coverage, please skip to the Benefits section (Section G).

F12. Did your company or organization calculate one premium equivalent, or different premium equivalents for single and family coverage?	One premium equivalent |__| Different for single and family |__|

If this plan had only one premium equivalent amount for single and family coverage (Question F12), please skip to the Benefits section (Section G). If the amounts were different for single and family coverage, please go on with Question F13.

F13. Did you have different premium equivalents for different family sizes or compositions? *For example, you may have calculated different premium evuivalents for a family of two, a family of three, and so on.*	Yes (Different) |__| No |__|

F14a. What was the premium equivalent for family coverage (for a family of four, including a spouse) per employee per month?	$_____ per month
F14b. What part of the premium equivalent (for family coverage) was contributed by the *employee*?	$_____ per month OR _____ percent
F14c. What part of the premium equivalent (for family coverage) was contributed by the *employer*?	$_____ per month OR _____ percent

Self-insured plans skip to the Benefits section (Section G).

	Fully-insured plans only:	
F15.	**What were the following costs for this plan in the most recent plan year that ended before April 1, 1994:**	
	a. total premiums for the year? *Please enter the total premiums for the year for all employees together (at this location).*	$_____
	b. benefits paid for claims incurred in the plan year?	$_____
	c. administration or claims processing costs? *Please enter either as a dollar amount or a percentage of premiums.*	$_____ OR _____% of premium

	Fully-insured plans only:	
F16.	**What is the name of the insurance company that wrote the policy for this plan?**	Blue Cross/Blue Shield |__| Aetna |__| Cigna |__| Metropolitan |__| Travelers |__| Prudential |__| Other |__|-> Who?_____

	Fully-insured plans only:	
F17.	**What is the policy number for this plan?** *The policy number may be used to request some general information about the plan from your insurance company.*	_____

F18a. Including both what the employer and the employee paid, what was the total monthly premium for an employee with single coverage per employee?	$_____ per month
F18b. What part of the total monthly premium (for single coverage) was contributed by the *employee*?	$_____ per month OR _____ percent
F18c. What part of the total monthly premium (for single coverage) was contributed by the *employer*?	$_____ per month OR _____ percent

If this plan did not offer family coverage, please skip to the Benefits section (Section G). If the plan did offer family coverage, please go on with Question F19.

F19. In the most recent plan year that ended before April 1, 1994, was the premium for family coverage the same as the premium for single cverage?	Yes (same premium) |__| No (different premiums) |__|

If this plan had the same premium for single and family coverage ("Yes" to Question F19), please skip to the Benefits section (Section G). If the plan had different premiums for single and family coverage, please go on with Question F20.

F20. Did this plan have different premiums for different family sizes or compositions? *For example, there may have been different premiums for a family of two, a family of three, and so on.*	Yes (Different) |__| No |__|

F21a. Including both what the employer and the employee paid, what was the total monthly premium for family coverage (for a family of four, including a spouse)?	$_____ per month
F21b. What part of the total monthly premium for family coverage was contributed by the *employee*?	$_____ per month OR _____ percent
F21c. What part of the total monthly premium for family coverage was contributed by the *employer*?	$_____ per month OR _____ percent

G. Benefits

G1. Please enter below the annual deductibles, if any, for this plan in the most recent plan year that ended before April 1, 1994? *A deductible is the amount the employee must pay for medical services before the plan begins to pay anything.*	*Please use both columns if the plan covered both preferred and non-preferred providers, or both providers in the plan and outside the plan. Otherwise, use the first column only.*	
	Preferred (In plan) Providers	Non-preferred (Out-of-plan) Providers
a. What was the deductible for inpatient services (stays in a hospital) for an individual with single coverage? *If none, enter "0" and go to d.*	$_____	$_____
If an amount other than 0 entered in a: **b. Was that inpatient deductible per stay or for the year?**	Per stay |__| For the year |__|	Per stay |__| For the year |__|
If "for the year" entered in b. **c. Did the same deductible apply to outpatient services (doctor visits)?**	Yes |__| No |__|	Yes |__| No |__|
Unless "No" entered in c. **d. What was the deductible for outpatient services (doctor visits) for an individual with single coverage?**	$_____	$_____

G2. What was the maximum deductible to be paid by the family in the year? *Please enter the number of people, the dollar amount, or both, as appropriate.*	Number of people meeting individual deductible _____ Dollar amount $_____

G3. **Please enter below the coinsurance rates or copayment amounts, if any, for this plan in the most recent plan year that ended before April 1, 1994.** *Coinsurance or copayment refers to the employee's share of the cost for a covered service, after the deductible has been met but before the maximum out-of-pocket expense has been reached.*

a. **What was the coinsurance rate for basic inpatient services (stays in the hospital)?**

0% or None |__|
10% or "90-10" |__|
15% or "85-15" |__|
20% or "80-20" |__|
25% or "75-25" |__|
30% or "70-30" |__|
50% or "50-50" |__|
Rate varied |__|
Other rate |__|->

What?_____

b. **How much did an employee have to pay when he or she saw a doctor?** *After the deductible had been met, but before the maximum out-of-pocket expense had been met. If the plan had different rates for preferred and non-preferred providers, or doctors in the plan and doctors not in the plan, please enter here the rate for preferred providers or doctors in the plan.*

$_____
OR
0% or Nothing |__|
10% or "90-10" |__|
15% or "85-15" |__|
20% or "80-20" |__|
25% or "75-25" |__|
30% or "70-30" |__|
50% or "50-50" |__|
Rate varied |__|
Other rate |__|->

What?_____

If the plan had different rates or copayment amounts for preferred and non-preferred providers, or for providers in and out of the plan:

c. **How much did an employee have to pay when he or she saw a non-preferred provider, or a doctor outside the plan?**

$_____
OR
0% or Nothing |__|
10% or "90-10" |__|
15% or "85-15" |__|
20% or "80-20" |__|
25% or "75-25" |__|
30% or "70-30" |__|
50% or "50-50" |__|
Rate varied |__|
Other rate |__|->

What?_____

G4.	**What was the maximum amount that this plan would pay over an employee's lifetime?** *Do not include limits that apply only to mental health, or only to certain diseases such as cancer or AIDS.*	$_____ OR No lifetime limit |__|

G5.	**Did this plan have a waiting period for pre-existing conditions for employees or their dependents?** *During such a waiting period, employees would be covered for new conditions, but not for pre-existing conditions.*	Yes |__| No |__|
	If there was a waiting period:	
a.	**How long was the waiting period for coverage of pre-existing conditions?** *If the waiting period differed depending on whether the employee was in treatment for the condition or not, please enter the waiting period for "in treatment."*	_____ days _____ months _____ years OR Never covered |__| Period varied |__|
	If there was a waiting period:	
b.	**Did the waiting period differ according to whether the employee was in treatment or not?**	Yes |__| No |__|

G6.	**Could this plan refuse to cover employees or their dependents who had particular health problems or conditions?** *That is, could the plan refuse to cover an employee* ***at all****, regardless of what the medical expenses were for?*	Yes (could refuse) |__| No |__|
	If the plan could refuse coverage:	
a.	**How many active employees or dependents were refused coverage at the end of the most recent plan year that ended before April 1, 1994?** *If none, please enter "0."*	_____ employees _____ dependents

G7.	**Which of the following services were covered by this plan in the most recent plan year ending before April 1, 1994?**	
	a. adult routine physical examinations?	Yes |__| No |__|
	b. routine mammography screening?	Yes |__| No |__|
	c. routine Pap smears?	Yes |__| No |__|
	d. childhood immunizations?	Yes |__| No |__|
	e. well-baby care, or checkups for children under one year of age?	Yes |__| No |__|
	f. checkups for children 1 to 4 years of age?	Yes |__| No |__|
	g. checkups for children 5 to 13 years of age?	Yes |__| No |__|

G8.	**Did this plan cover outpatient prescription drugs (that is, drugs prescribed by a doctor outside of a hospital)?** *If prescription drugs were not covered, please skip to Question G9.*	Yes |__| No |__|
	a. What was the dollar limit for outpatient prescription drug coverage in a year?	$_____ OR No dollar limit |__|
	b. Did this plan require that generic drugs be purchased if available?	Yes |__| No |__|

G9.	**In the most recent plan year that ended before April 1, 1994, did this plan cover routine dental care?** *Routine dental care includes such things as cleanings, checkups and fillings.* *If routine dental care was not covered, please skip to Question G10.*	Yes |__| No |__|
	a. Did this plan cover orthodontic care other than that required by accident or injury?	Yes |__| No |__|

G10.	**In the most recent plan year that ended before April 1, 1994, did this plan cover routine eye examinations?** *If routine eye examinations were not covered, please skip to Question G11.*	Yes |__| No |__|
	a. Were eyeglasses or contact lenses covered? *Please answer "Yes" for any coverage, even if limited.*	Yes |__| No |__|

G11.	**In the most recent plan year that ended before April 1, 1994, was care in a nursing home covered under this plan?** *If care in a nursing home was not covered, please skip to Question G12.*	Yes |__| No |__|
	a. What was the limit on the number of days or dollar amount that would be covered for care in a nursing home? *Please enter all types of limits that apply.*	_____ days per year _____ days per stay $_____ per day (per diem) $_____ per year No limit |__|

G12. **In the most recent plan year that ended before April 1, 1994, were personal care services in the home covered under this plan?** *"Personal care services in the home" include help a person may receive at home with activities of daily living, such as bathing, eating, and dressing. Such help may be provided by nurse's aides or other paid professionals.*	Yes |__| No |__|

G13. **In the most recent plan year that ended before April 1, 1994, was home health care covered under this plan?** *"Home health care" includes care by registered nurses (R.N.), licensed practical nurses (L.P.N.), home health aides, or various kinds of therapists given to a person in his or her home.* *If home health care was not covered, please skip to Question G14.*	Yes |__| No |__|
a. **What was the limit on the number of visits or dollar amount that would be covered for home health care?** *Please enter all types of limits that apply.*	_____ visits per year $_____ per year No limit |__|

G14. **In the most recent plan year that ended before April 1, 1994, did this plan cover *inpatient* mental health services?** *If inpatient mental health services were not covered, please skip to Question G15.*	Yes |__| No |__|
a. **What was the limit on the number of days or dollar amount that would be covered for inpatient mental health services?** *Please enter all types of limits that apply. Do not include a separate deductible or coinsurance rate that may apply to mental health benefits.*	_____ days per stay _____ days per year _____ days for lifetime $_____ per stay $_____ per year $_____ for lifetime No limit |__|

G15. In the most recent plan year that ended before April 1, 1994, did this plan cover *outpatient* mental health services? *If outpatient mental health services were not covered, please skip to Question G16.*	Yes |__| No |__|
a. What was the limit on the number of visits or dollar amount that would be covered for outpatient mental health services? *Please enter all types of limits that apply. Do not include a separate deductible or coinsurance rate that may apply to mental health benefits.*	Limits same as inpatient |__| ***(Do not re-enter limits)*** _____ visits per year _____ visits for lifetime $_____ per year $_____ for lifetime No limit |__|

16.	**In the most recent plan year that ended before April 1, 1994, did this plan cover *inpatient substance abuse* services (including either alcohol or drug abuse treatment)?** *If inpatient substance abuse services were not covered, please skip to Question G17.*	Yes |__| No |__|
	a. What was the limit on the number of days or dollar amount that would be covered for inpatient substance abuse treatment? *Please enter all types of limits that apply. Do not include a separate deductible or coinsurance rate that may apply to substance abuse benefits.*	Limits same as mental health |__| ***(Do not re-enter limits)*** _____ days per stay _____ days per year _____ days for lifetime $_____ per stay $_____ per year $_____ for lifetime No limit |__|

G17. In the most recent plan year that ended before April 1, 1994, did this plan cover *outpatient* substance abuse treatment? *If outpatient substance abuse services were not covered, please go to next plan. If no other plan, please go to instructions for returning the questionnaires, on the back of the Establishment Questionnaire.* **a. What was the limit on the number of visits or dollar amount that would be covered for outpatient substance abuse treatment?** *Please enter all types of limits that apply. Do not include a separate deductible or coinsurance rate that may apply to substance abuse benefits.*	Yes |__| No |__| Limits same as already reported |__| ***(Do not re-enter limits)*** _____ visits per year _____ visits for lifetime $_____ per year $_____ for lifetime No limit |__|

Please go on to the next plan. If there is no other plan, please go to the instructions for returning the questionnaires, on the back of the Establishment Questionnaire.

Thank you very much for completing this questionnaire. Please return all completed questionnaires in the postpaid envelope that came with the package, or mail to:

National Employer Health Insurance Survey
Westat, Inc., WB-220
1650 Research Blvd.
Rockville, MD 20850

Appendix III

National Employer Health Insurance Survey establishment and plan analytic variables list

Variable name (a)	Variable description (b)	Item response rate (percent) (c)	Imputed variable[1] (d)	Imputation method (for imputed variables)	
				Public sector (e)	Private sector (f)
	Establishment				
SAMPTYPE	Whether private or public sector	†			
GOVTYPE	Type of government	†			
FINALPU	Final purchasing unit status (government sample)	†			
FIPS	Fips State code	†			
CENSUSRE	Census division	†			
SICCODE2	Type of business/industry recode (SIC)	†			
OWNTYPE	Type of ownership	97			
INEXIST	Number of years firm been in existence	96			
MULTILOC	Whether multilocation firm	100			
MULTSTAT	Whether multi-State firm	99			
NUMLOCUS	Number of locations (branches) nationwide	100			
MACODERE	Metropolitan area indicator	†			
FTMINHR	Hours worked per week to be full time	92			
PAYROLL	1993 payroll	60	x	Regression	Regression
INSURE2	Was health insurance offered to employees 12/31/93	[2]100			
	Employees:				
FIRMSIZN	Number of employees nationwide as of 12/31/93	[3]100			
EESTATEN	Number of firm employees in State	90			
ESTSIZEN	Total number of establishment employees as of 12/31/93	[4]100			
NOEEPLYR	Number of employees in establishment at end of plan year	98			
UNEESNUM	Number of union employees in establishment	92			
UNCOVNOC	Number of employees with insurance from union	96			
ASCOVNOC	Number of employees with insurance from trade/professional association	96			
I_FTEESN	Number of full-time employees: 12/31/93	93	x	Hot deck	Hot deck
I_PTEESN	Number of part-time employees: 12/31/93	93			
I_EESELI	Total number of eligible employees: 12/31/93	93	x	Hot deck	Hot deck
I_FTELIG	Number of full-time eligible employees: 12/31/93	92	x	Hot deck	Hot deck
I_PTELIG	Number of part-time eligible employees: 12/31/93	88			
I_EESCOV	Total number of enrolled employees: 12/31/93	92	x	Hot deck	Hot deck
I_FTCOV	Number of full-time enrolled employees: 12/31/93	91	x	Hot deck	Hot deck
I_PTCOV	Number of part-time enrolled employees: 12/31/93	68			
TSEESNUM	Total number of temporary/seasonal employees: 12/31/93	91			
FTTSEENU	Number of full-time temporary/seasonal employees: 12/31/93	92			
PTTSEENU	Number of part-time temporary/seasonal employees: 12/31/93	91			
TSELIGNU	Total number of eligible temporary/seasonal employees: 12/31/93	70			
FTTSELNU	Number of full-time eligible temporary/seasonal employees: 12/31/93	39			
PTTSELNU	Number of part-time eligible temporary/seasonal employees: 12/31/93	69			
TSENRNUM	Total number of enrolled temporary/seasonal employees: 12/31/93	34			
FTTSCONU	Number of full-time enrolled temporary/seasonal employees: 12/31/93	30			
PTTSCONU	Number of part-time enrolled temporary/seasonal employees: 12/31/93	20			

Variable name (a)	Variable description (b)	Item response rate (percent) (c)	Imputed variable[1] (d)	Imputation method (for imputed variables)	
				Public sector (e)	Private sector (f)
EESMAJNU	Number of employees enrolled in MAJOR plans at end of plan year	82	x	Modal	Regression
D6	Were retirees aged 65 years and over eligible for health insurance	98	x	Modal	Modal
D7	Were retirees under 65 years of age eligible for health insurance	98	x	Modal	Hot deck
C23P	Percent of hourly employees	([5])			
C26P	Percent of salaried employees	([6,7])			
PCTLOWAG	Percent of employees earning less than $5 per hour or less than $10,000 per year	83			
PTMIDWAG	Percent of employees earning $5 to less than $15 per hour or $10,000 to less than $30,000 per year	81			
PCTHIWAG	Percent of employees earning $15 per hour or more or $30,000 per year or more	81			
	Health insurance offered:				
D8	Did firm pool with other employers for health insurance (MET/MEWA)	98			
D9	Is health insurance plan year a calendar year	98			
TYPHIOFF	Types of health insurance plans offered	††			
MAJPLOFF	Number of major plans offered in plan year 1993	††			
MAJPLOF2	Number of major plans—at least one enrolled	††			
SGLPLOFF	Number of single service and special plans	††			
SGLPLOF2	Number of single service and special plans—at least one enrolled	††			
MAJPLRE	Whether establishment offers managed care, fee-for-service, and/or other plans	††			
DMAJPLRE	Detailed managed care plan recode	††			
ANYSELF	Does establishment have any self-insured plans	[8]100			
MAJSELF	Does establishment have any self-insured major plan	94			
	Does establishment have stop-loss coverage	([9])			
	Stop-loss premium amount	([10])			
OFFHMO	Is HMO plan offered	††			
OFFCOMB	Is POS plan offered	††			
OFFPPO	Is PPO plan offered	††			
OFFCON	Is fee-for-service plan offered	††			
OFFDENT	Is dental only plan offered	††			
OFFVISON	Is vision only plan offered	††			
OFFDRUG	Is prescription drug only plan offered	††			
OFFLTC	Is long-term care plan offered	††			
OFFDRDIS	Is dread disease plan offered	††			
OFFHOSIN	Is hospital indemnity plan offered	††			
ALPLCOST	Total costs for all plans for 1993 plan year	55	x	Regression	Regression
PLCOST93	Total cost for all plans for 1993 (calendar year)	66	x	Regression	Other
	Health insurance cost as a percent of payroll		x	Hot deck	Hot deck
WAITPERL	Waiting period for new employees to be eligible for coverage	90			
MINHRELN	Hours per week of work to be eligible for coverage	94			
A15	Whether firm contributes to union plan	98			
	Health insurance not offered:				
A24	Was health insurance offered in past 5 years	97			
A25	Year health insurance was last offered	86			
D11A	Employee benefits offered: Paid vacation	99			
D11B	Sick leave	99			
D11C	Disability insurance	98			
D11D	Life insurance	99			
D11E	Retirement plan	99			
D12	Does firm offer a flexible spending account	99			
N1	Does employer contribute to spouse's insurance plan	92			
N2	Does employer provide voucher to purchase health insurance	93			

Variable name (a)	Variable description (b)	Item response rate (percent) (c)	Imputed variable[1] (d)	Imputation method (for imputed variables)	
				Public sector (e)	Private sector (f)
N3	Can voucher be used for other purposes	98			
N5	Does employer pay employee's medical bills directly	93			
VOUCHAMT	Annual amount of voucher	††††			
	Plan type				
PLANTYP3	Type of health insurance plan (edited)	([11])			
E3	Type of plan (respondent reported)	100			
ASSNNEW	Is this a professional association plan	††††			
UNIONNEW	Is this a union plan	††††			
METWANEW	Is this a MET/MEWA plan	††††			
J13	Is this a Blue Cross/Blue Shield plan	86			
FAMILNEW	Does plan offer family coverage	††††			
SELFINSU	Is plan a self-insured (self-funded) plan	[12]100			
	Plan enrollment				
I_EEENRP	Number of active employees enrolled at end of plan year	83	x	[13]Other/ regression	Regression
I_COBRAE	Number of COBRA enrolled at end of plan year	70	x	Regression/ hot deck	Regression/ hot deck
I_RETO65	Retirees aged 65 years or older enrolled at end of plan year	88	x	Regression	Hot deck
I_RETU65	Retirees under age 65 years enrolled at end of plan year	85	x	Regression	Regression/ hot deck
H9NUM	Number of active employee dependents covered	54			
H10	Number of COBRA employee dependents covered	88			
H11	Number of retiree dependents covered	70			
EESINENR	Number of employees with single coverage				
EEFAMENR	Number of employees with family coverage	72			
EEFAMPCT	[14]Percent of enrollees with family coverage (EEFAMENR/EEENRPY)	††††	x	Hot deck	Hot deck
	Plan restrictions				
PREEXPER	Waiting period for preexisting conditions (in days)	87			
P21UNT	Waiting period for preexisting conditions (other)	††††			
P16	Can plan exclude employees with certain health conditions	92			
P17	Were any employees denied coverage because of certain health conditions in plan year 1993	92			
P18	Number of employees denied coverage	74			
	Coinsurance and copayments				
P1AANEW	Does plan cover inpatient hospital services	††††			
P1BNEW	Does plan cover outpatient medical services	††††			
COPAYINP	Inpatient copayment indicator				
P7AMT	Inpatient copayment amount	99			
I_COINSI	Inpatient coinsurance rate	93	x	Hot deck	Regression/ hot deck
I_COOPPR	Whether preferred outpatient providers have coinsurance or copayment	93	x	†††	†††
I_COOPPR	Preferred provider outpatient coinsurance rate	88	x	Modal	Modal
I_CPOPPR	Preferred provider outpatient copayment	87	x	Regression	Modal
I_COOPNP	Whether nonpreferred outpatient providers have coinsurance or copayment	83	x	†††	†††
I_COIPNP	Nonpreferred provider outpatient coinsurance rate	82	x	Modal	Modal
I_CPOPNP	Nonpreferred provider outpatient copayment	24	x	Modal	Hot deck
	Plan deductibles				
I_TOTDPR	Total annual deductible, preferred providers	92	x	Hot deck/ regression	Hot deck
P2A	Is there one deductible for both inpatient and outpatient services, preferred providers	97			

Variable name (a)	Variable description (b)	Item response rate (percent) (c)	Imputed variable[1] (d)	Imputation method (for imputed variables)	
				Public sector (e)	Private sector (f)
I_INPDPR	Inpatient deductible, preferred providers	88	x	Regression/ modal	Hot deck
I_P3A	Is inpatient deductible per admission/ per year, preferred providers	95		†††	†††
I_OUTDPR	Outpatient deductible, preferred providers	86	x	Regression	Regression
I_TOTDNP	Total annual deductible, nonpreferred providers	88	x	Hot deck/ regression	Hot deck
I_P5A	Is there one deductible for both inpatient and outpatient services, nonpreferred providers	99	x	†††	†††
I_INPDNP	Inpatient deductible, nonpreferred providers	89	x	Regression/ modal	Hot deck/ regression
I-P5D	Is inpatient deductible per admission/ per year, nonpreferred providers	97			
I_OUTDNP	Outpatient deductible, nonpreferred providers	88	x	Regression/ modal	Regression
P6FMT	Does plan have a maximum family deductible amount	91			
P6AMTNEW	Dollar amount of maximum family deductible per year	††††			
P6NUMNEW	Number of family members for maximum deductible	††††			
P6PCTNEW	Maximum family deductible as percent of salary	††††			
MAXLIFBE	Is there a maximum lifetime benefit	82			
MAXLIAMT	Amount of maximum lifetime benefit	99			
	Plan costs and premiums				
	All plans:				
ANYPLCST	Total plan cost (fully and self-insured plans)	64			
ADMINCST	Plan administrative costs	26	x	Regression	Hot deck
BENEPAID	Total claims paid during plan year	28	x	Regression	Regression
BENPEREE	Ratio of total annual claims paid to enrollees in plan year	26			
	Self-insured (self-funded) plans:				
J14	Who was plan administrator (self-insured plans)	93	x	Hot deck	Hot deck
TOTPLCST	Total plan cost (self-insured plans)	45	x	Regression	Hot deck
SLOSSCAT	Stop-loss premium provisions for this plan (self-insured plans)	90	x	†††	†††
SLOSSPRE	Annual stop-loss premium amount (self-insured plans)	37	x	Regression	Hot deck
CSTPEREE	Ratio of total annual plan cost to enrollees at end of plan year (self-insured plans)	([15])			
	Premium equivalents (self-insured plans):				
L1	Does firm calculate a ''Premium equivalent'' or cost per employee	††††			
L6A	Were retirees included in premium equivalent	99			
L2	Does premium equivalent include cost of processing medical claims	††††	x	Hot deck	Hot deck
L10	Are different ''Premium equivalents'' calculated for different family sizes	99			
L3	Are different premium equivalents calculated for single and family coverage	††††	x	Modal	Modal
	Premiums or premium equivalents (self-insured plans):				
PREQSCOV	Premium (or premium equivalent) for single coverage, (self-insured plans)	††††	x	Other	Other
EECNTSCS	*Employee* monthly contribution for single coverage, (self-insured plans)	††††	x	Hot deck	Hot deck
EEPCTSCS	Percent of monthly premium (or premium equivalent) contributed by employee-single coverage, (self-insured plans) (EECNTSCS/PREQSCOV)	††††	x	Hot deck	Hot deck
ERCNTSCS	*Employer* monthly contribution for single coverage, (self insured plans)	††††	x	Regression	Regression
ERPCTSCS	Percent of premium contributed by employer for single coverage, (self-insured plans)	††††	x	Hot deck	Hot deck
PREQSADJ	Premium (or premium equivalent) for single coverage, adjusted for administrative costs	††††	x	Other	Other
ERCNTSAD	*Employer* monthly contribution for single coverage, adjusted for administrative costs, (self-insured plans)	††††	x	Regression	Regression
ERPCTSAD	Percent of premium (or premium equivalent) adjusted for administrative costs, contributed by employer for single coverage, (self-insured plans) (ERCNTSAD/PREQSADJ)	††††	x	Hot deck	Hot deck
PREQFCOV	Premium (or premium equivalent) for family coverage	††††	x	Other	Other
EECNTFCS	Employee monthly contribution for family coverage, (self-insured plans)	††††	x	Hot deck	Hot deck

Variable name (a)	Variable description (b)	Item response rate (percent) (c)	Imputed variable[1] (d)	Imputation method (for imputed variables)	
				Public sector (e)	Private sector (f)
EEPCTFCS	Percent of monthly premium (or premium equivalent) contributed by employee for family coverage, (self-insured plans) EECNTFCS/PREQFCOV)	††††	x	Other	Hot deck
ERCNTFCS	Employer monthly contribution for family coverage, (self-insured plans)	††††	x	Hot deck	Regression
ERPCTFCS	Percent of premium contributed by employer for family coverage,(self-insured plans) (ERCNTFCS/PREQFCOV)	††††	x	Other	Hot deck
PREQFADJ	Premium (or premium equivalent) for family coverage adjusted for administrative costs	††††	x	Other	Other
ERCNTFAD	Employer monthly contribution adjusted for administrative costs, for family coverage, (self-insured plans)	††††	x	Regression	Regression
ERPCTFAD	Percent of premium (or premium equivalent), adjusted for administrative costs, contributed by employer for family coverage, (self-insured plans) (ERCNTFAD/PREQFADJ)	††††	x	Hot deck	Hot deck
	Fully insured plans:				
TOTANPRE	Total annual premium (fully insured plans)	73	x	Regression	Regression
PREPEREE	Ratio of total annual premiums to all enrollees (fully insured plans)	([16])			
L21A	Were retirees included in premium	††††			
L19	Does plan have different premiums for single and family coverage (fully insured plans)	††††	x	†††	†††
	Premiums (fully insured plans):				
PREMSCOV	Monthly premium for single coverage (fully insured plans)	††††	x	Regression	Regression
EECNTSCF	*Employee* monthly contribution for single coverage, (fully insured plans)	††††	x	Hot deck	Hot deck
EEPCTSCF	Percent of monthly premium contributed by employee for single coverage, (fully insured plans) (EECNTSCF/PREMSCOV)	††††	x	Regression	Hot deck
ERCNTSCF	*Employer* monthly contribution for single coverage, (fully insured plans)	††††	x	Regression	Regression
ERPCTSCF	Percent of premium contributed by employer for single coverage, (fully insured plans) (ERCNTSCF/PREMSCOV)	††††	x	Regression	Hot deck
PREMFCOV	Monthly premium for family coverage (fully insured plans)	††††	x	Regression	Regression
L25	Are different premiums calculated for different family sizes	95			
FAMFLAG	Family premium not given for family of four	([17])			
EECNTFCF	*Employee* monthly contribution for family coverage, (fully insured plans)	††††	x	Hot deck	Regression
EEPCTFCF	Percent of monthly premium contributed by employee for family coverage, (fully-insured plans) (EECNTFCF/PREMFCOV)	††††	x	Regression	Regression
ERCNTFCF	*Employer* monthly contribution for family coverage, (fully insured plans)	††††	x	Regression	Regression
ERPCTFCF	Percent of premium contributed by employer for family coverage, (fully insured plans) (ERCNTFCF/PREMFCOV)	††††	x	Regression	Regression
	Preventive services				
S5	Does plan cover well-baby care (children under age 1 year)	91			
S6	Does plan cover well child care (children aged 1–4 years)	89			
S7	Does plan cover well child care (children aged 5–13 years)	89			
S4	Does plan cover childhood immunizations	91			
S2	Does plan cover adult routine physical examinations	95			
S1	Does plan cover routine mammography	88			
S3	Does plan cover routine pap smears	93			
S27	Does plan cover routine dental care	97			
S28	Does plan cover orthodontic care other than for injuries	96			
S29	Does plan cover routine eye examinations	96			
S30	Are eyeglasses and contact lenses covered	98			
	Other covered services and limits				
S8	Does plan cover *outpatient prescription drugs*	96			
S9A	Any annual limit for outpatient prescription drugs	93			
S9AOV	Any dollar limit for outpatient prescription drugs	80			
S9AOVAMT	Amount of dollar limit for outpatient prescription drug coverage	97			
S10	Are generics required for outpatient prescription drugs	96			
S11	Does plan cover *inpatient mental health services*	91			

Variable name (a)	Variable description (b)	Item response rate (percent) (c)	Imputed variable[1] (d)	Imputation method (for imputed variables)	
				Public sector (e)	Private sector (f)
S12	Any day/dollar limits on inpatient mental health services	85			
S13YEAR	Are the limits for inpatient mental health services—per year	96			
S14AMTYR	Annual dollar limit for inpatient mental health services	79			
S14DAYYR	Annual day limit for inpatient mental health services	95			
S13EPIS	Are the limits for inpatient mental health services—per episode	92			
S14AMTEP	Per episode dollar limit for inpatient mental health services	43			
S14DAYEP	Per episode day limit for inpatient mental health services	71			
S13STAY	Are the limits for inpatient mental health service—per stay	96			
S14AMTST	Per stay dollar limit for inpatient mental health services	45			
S14DAYST	Per stay day limit for inpatient mental health services	85			
S13LIFE	Are the limits for inpatient mental health services—per life	95			
S14AMTLI	Lifetime dollar limit for inpatient mental health services	90			
S14DAYLI	Lifetime day limit for inpatient mental health services	59			
S15	Does plan cover *outpatient mental health services*	88			
S16	Any visit/dollar limits on outpatient mental health services	85			
S17AMT	Annual *dollar* limit for outpatient mental health services	88			
S17VIS	Annual *visit* limit for outpatient mental health services	92			
S18	Does plan cover *substance abuse treatment*	89			
S19	Does plan cover *inpatient* substance abuse treatment	97			
S20	Any day/dollar limits on inpatient substance abuse	83			
S21AMT	*Dollar* limit for inpatient substance abuse treatment	80			
S21DAY	*Day* limit for inpatient substance abuse treatment	91			
S24	Does plan cover *outpatient* substance abuse treatment	95			
S25	Any visit/dollar limits on outpatient substance abuse treatment	75			
S26AMT	*Dollar* limit for outpatient substance abuse treatment	87			
S26VIS	*Visits* limit for outpatient substance abuse treatment	91			
S31	Does plan cover *nursing home care*	78			
S32	Any day/dollar limits on nursing home care	79			
S33	*Dollars per day* limit on nursing home care	34			
S33AMT	*Annual dollar* limit on nursing home care	70			
S33DAY	*Day* limit for nursing home care	91			
S34	Does plan cover *home health care*	85			
S35	Any visit/dollar limits on home health care	80			
S36AMT	*Dollar* limit for home health care	68			
S36DAY	*Day* limit for home health care	88			
S34A	Does plan cover *personal care services* in the home	76			
FPLAN-WT	Final plan weight				

† Identifies analytic variables obtained from data sources other than from NEHIS respondents (e.g., sample frame file).

†† Identifies NEHIS analytic variables that were constructed from a listing of respondent- enumerated health insurance plans; therefore, these variables contain no missing values.

††† Imputation method not available at press time.

†††† Item response rate not available.

[1]Each imputed variable, denoted by *x* in column d, contains an additional flag variable on the NEHIS data file to indicate whether the data entry for that specific establishment/plan record was derived from imputation.

[2]This data item was required for NEHIS.

[3]The sample frame file or edits were used to fill this data item in a small number of cases.

[4]See footnote 3.

[5]Secondary constructed variable—not asked of respondent.

[6]See footnote 5.

[7]Variable not currently available.

[8]''Don't know'' responses to whether a self-insured plan were coded to ''not a self-insured plan.''

[9]Variable not currently available.

[10]See footnote 9.

[11]Variable derived from respondent-provided information. Therefore, this variable contains no missing values.

[12]See footnote 8.

[13]Imputations were performed separately among fully insured and self-insured plans.

[14]Enrollees include active employees and former employees, including retirees.

[15]See footnote 5.

[16]See footnote 11.

[17]Respondent volunteered.

NOTES: For analytic variables and corresponding item response rates for self-employed with no employees, see *Health Insurance Coverage of the Self-Employed With No Employees: Estimates From the National Employer Health Insurance Survey, United States, 1993* (7).

NEHIS is defined as National Employer Health Insurance Survey. SIC is defined as Standard Industrial Classification code. HMO is defined as health maintenance organization. POS is defined as point-of-service plan. PPO is defined as preferred provider organization.

Appendix IV

National Employer Health Insurance Survey nonresponse questionnaire—October 13, 1997

1. What was the total number of employees at the {FULL ADDRESS, EXCEPT ZIP} location {NAME} on December 31, 1993? Please include both full- and part-time employees.

   _____ EMPLOYEES

2. Did your company or organization offer a group health insurance plan for employees as of December 31, 1993?
   1. YES (4)
   2. NO (3)

3. Did your company or organization offer a group health insurance plan for employees in the past five years?
   1. YES (END)
   2. NO (END)

4. How many group health insurance plans did your company or organization offer employees at this location?
   _____ PLANS

5. How many employees were *eligible* for your health benefits as of December 31, 1993?
   _____ (NUMBER) EMPLOYEES

   OR
   _____ PERCENT OF EMPLOYEES

6. How many employees were actually *enrolled* in (all) your health plans(s) as of December 31, 1993?
   _____ (NUMBER) EMPLOYEES

   OR
   _____ PERCENT OF EMPLOYEES

7. Which of the following kinds of plans did you offer as of December 31, 1993?

   a. a Health Maintenance Organization, or HMO?
      1. YES
      2. NO

   b. a Preferred Provider Organization plan, or PPO?
      1. YES
      2. NO

   c. a Point-of-service or open-ended HMO plan, or other plan that combined features of an HMO with those of another type of plan?
      1. YES
      2. NO

   d. a traditional or conventional health insurance plan, also called an ‘‘indemnity’’ plan?
      1. YES
      2. NO

8. About what percentage of your total annual payroll did health care costs represent in 1993? Please include all premiums or claims paid by your company for both full-time and part-time employees and any former employees or retirees that were covered. Please also include premiums paid by employees and any other costs such as, administrative costs, stop-loss coverage or reinsurance.
   _____ %

END: Thank you very much. Those are all the questions I have.

OMB No: 0920-0341; Approval Expires: December 31, 1994

CASE NO: _____

National Employer Health Insurance Survey

conducted for

The United States Department of Health and Human Services

Self-Employed Questionnaire

NATIONAL EMPLOYER HEALTH INSURANCE SURVEY

SELF-EMPLOYED QUESTIONNAIRE

INTRODUCTION:

A. Hello, may I speak with (NAME)?

[IF (NAME) IS TEMPORARILY UNAVAILABLE, TRY TO FIND OUT WHEN SHE/HE WILL BE AVAILABLE. IF (NAME) WILL NOT BE AVAILABLE TO CONDUCT INTERVIEW, (NAME'S) SPOUSE MAY ACT AS PROXY]

My name is (INTERVIEWER NAME) and I am calling for the United States Department of Health and Human Services regarding a study we are conducting about health insurance. (IF ASKED ABOUT PURPOSE: This study is being conducted to collect information on the availability and cost of health insurance. Results will be used to develop estimates of health care spending at the state level and to evaluate health care reform efforts.)

Recently, the National Center for Health Statistics mailed a letter to (you/NAME). Did you have a chance to read this letter?

YES, RECEIVED AND READ.....1 (C)
NO, NOT RECEIVED OR READ 2

B. The letter stated that this survey information is collected under the authority of the Public Health Service Act. Information will be held in strict confidence and will be used for statistical purposes only, as required by Section 308 (d) of the Act. No individual person or organization will ever be identified in any statistical summary which is released or published. Your participation is voluntary and there is no penalty for not participating in the survey. It will take about 5-15 minutes to collect the information.

C. [INTERVIEWER: WHAT TYPE OF RESPONDENT WILL YOU BE INTERVIEWING?]

SUBJECT (NAME) 1
SPOUSE AS PROXY 2
OTHER PROXY 3

SECTION A.

A1. As of December 31, 1993, did (you/NAME) work at a job or business, not counting work around the house? Include unpaid work in the family business or farm.

YES 1 (A3)
NO 2

A2. Even though you did not work at that time, did you have a job or business on December 31, 1993?

YES 1
NO .....2 (END)

A3. As of December 31, 1993, (were you/was NAME) . . .

Self-employed in (your/his/her) own business, professional practice, or farm, ...1
An employee of a private company, business, or individual for wages, salary or commission, ...2 (END)
An employee of a Federal, state, or local government, ...3 (END)
Working without pay in a family business or farm, or .....4 (END)
Something else? (SPECIFY)_____ 6 (END)

[PROBE IF PERSON HAS MORE THAN ONE JOB OR BUSINESS: Please answer for your main job or business.]

A4. As of December 31, did (your/NAME's) business have any paid employees besides (yourself/him/her)?

YES 1
NO 2 (A6)
DON'T KNOW .....8 (END; CODE AS PROBLEM)

A5. Besides (yourself/him/her), how many employees did (your/NAME's) business have on December 31, 1993?

_____ (END)
EMPLOYEES

END: Thank you very much. Those are all the questions I have for you.

A6. The next questions are about health insurance coverage (you/NAME) may have had through a public program, through a group, or purchased directly from an insurance company.

As of December 31, 1993, (were you/was NAME) covered by Medicare?

(PROBE: Medicare is a Social Security health program for disabled persons and for persons over 65 years of age.)

YES 1
NO 2

A7. (Were you/Was NAME) covered at that time by (Medicaid/MediCal), a program funded by the state and Federal governments?

YES 1
NO 2

A8. At that time, (were you/was NAME) covered by any other government program that pays for health care, such as CHAMPUS or CHAMPVA?

YES 1
NO 2

A9. On December 31, 1993, did (you/NAME) have any other kind of health insurance plan besides those we have already discussed? Please include an HMO or any other plan that pays hospital or doctor bills.

YES 1
NO .....2 (SECTION D)
DON'T KNOW.....8 (SECTION D)

A10a. What is the name of the plan (you/NAME) were covered under as of December 31, 1993?

PLAN 1. _____ ®

® **RECORD NAME HERE AND ON REFERENCE SHEET.**

A10b. As of December 31, 1993, did (you/NAME) have any other kind of health insurance, like a plan that covers only dental care, vision care, or prescription drugs? [PROBE: Any others?]

YES ..... 1 (RECORD BELOW)
NO 2 (A11)

PLAN 2. _____ ®

PLAN 3. _____ ®

PLAN 4. _____ ®

PLAN 5. _____ ®

® **RECORD NAME(S) HERE AND ON REFERENCE SHEET.**

A11. Is (PLAN 1) a Blue Cross/Blue Shield plan?

YES 1
NO 2

A12. Is (PLAN 1) an HMO, a PPO, a conventional health insurance plan, a combination of these types, or some other type of health insurance plan? [OFFER DEFINITIONS FROM CARD AS NEEDED.]

HMO/EPO/IPA ..... 01 ® (A18)
PPO ..... 02 ® (A18)
CONVENTIONAL/INDEMNITY ..... 03 ®
COMBINATION/POS/OPEN-END HMO ..... 04 ® (A17)

SINGLE SERVICE:

DENTAL ..... 05 ® (A18)
VISION ..... 06 ® (A18)
PRESCRIPTION DRUGS ..... 07 ® (A18)

SPECIAL:

LONG-TERM CARE ..... 08 ® (A18)
DREAD DISEASE ..... 09 ® (A18)
HOSPITAL/INDEMNITY OR EXTRA CASH ..... 10 ® (A18)

OTHER:

DISABILITY ..... 11 (Box C-12, p. 22)
LIFE ..... 12 (Box C-12, p. 22)

OTHER (Specify) _____ 13 ® (A14)
DON'T KNOW ..... 98 ® (A14)

® **CODE HERE AND ON REFERENCE SHEET.**

A13. (Do you/Does NAME) pay less if (you/he/she) use(s) particular doctors, or preferred providers, under this plan?

YES ..... 1 ®
NO 2

® **IF "YES," CHANGE A12 TO "2" ON REFERENCE SHEET.**

SKIP TO A18

A14. Is (PLAN 1) a health insurance plan?

YES 1
NO ..... 2 (BOX C-12, p. 22)
DON'T KNOW ..... 8 (BOX C-12, p. 22)

A15. Under this plan, (are you/is NAME) covered only if (you/he/she) see(s) providers participating in the plan?

YES ..... 1 ® (A18)
NO 2

® **IF "YES," CHANGE A12 TO "1" ON REFERENCE SHEET.**

A16. (Do you/Does NAME) pay less if (you/he/she) use(s) particular doctors, or preferred providers, under this plan?

YES ..... 1 ®
NO 2

® **IF "YES," CHANGE A12 TO "2" ON REFERENCE SHEET.**

SKIP TO A18

A17. Does (PLAN 1) have an HMO component?

YES 1
NO 2

A18. (Are you/Is NAME) the primary insured person for this plan, or is it someone else? [PROBE: Whose name is on the policy?]

SUBJECT (NAME) IS PRIMARY INSURED.....1 (A21)
OTHER PERSON IS PRIMARY INSURED 2
DON'T KNOW.....8 (A21)

A19. What is that person's relationship to (you/NAME)?

SPOUSE.....1
PARENT 2
OTHER (SPECIFY).....3

A20. Did this person obtain the plan directly from the (HMO/PPO/insurance company), or did (he/she) get it through an employer, a union, or some other group?

[IF THROUGH EMPLOYER, PROBE: Was that an employer (he/she) was working for on December 31, 1993, or a former employer?]

DIRECTLY FROM INSURANCE COMPANY/HMO/PPO.....1
THROUGH EMPLOYER ON 12/31/93.....2 ®
THROUGH FORMER EMPLOYER (COBRA) .....3 ®
THROUGH UNION.....4
THROUGH PROFESSIONAL OR TRADE ASSOCIATION.....5
THROUGH ANOTHER GROUP(SPECIFY)_____ 6

® **CODE HERE AND ON REFERENCE SHEET.**

SKIP TO SECTION C, PAGE 8

A21. Did (you/NAME) purchase this plan directly from the (HMO/PPO/insurance company), or did (you/he/she) get it through (your/his/her) business, through an employer, a union, or some other group?

[IF THROUGH EMPLOYER, PROBE: Was that an employer you were working for on December 31 or a former employer?]

DIRECTLY FROM INSURANCE COMPANY/HMO/PPO.....01 (Sect. C)
THROUGH EMPLOYER ON 12/31/93.....02 (BOX C-12)
THROUGH FORMER EMPLOYER (COBRA).....03
THROUGH OWN BUSINESS .....04 (Sect. C)
THROUGH UNION.....05 (Sect. C)
THROUGH PROFESSIONAL OR TRADE ASSOCIATION.....06 (Sect. C)
THROUGH ANOTHER GROUP (SPECIFY) _____ 07 (Sect. C)

A22. Was this plan a retirement benefit?

YES 1
NO 2

SKIP TO BOX C-12, PAGE 22.

SECTION C

C1. Did (PLAN 1) cover only (you/NAME) on December 31, or did it cover other members of (your/NAME's) family as well?

Covered (NAME) only 1 (C4)
Covered other family members as well.....2 ®
DON'T KNOW 8 (C4)

® **CODE HERE AND ON REFERENCE SHEET.**

C2. Did this plan cover...

		YES	NO
a.	(NAME's) spouse?	1	2
b.	dependent children?	1	2
c.	anyone else in the family?	1	2

C3. Including (you/Name), how many family members did this plan cover altogether? [IF OBVIOUS, CODE WITHOUT ASKING]

_____
FAMILY MEMBERS

C4. What was the total premium (you/NAME) paid for (PLAN 1) in 1993?

DOLLAR AMOUNT (Specify) $ _____ 1
PAID NOTHING .....2 (BOX C-1)
DON'T KNOW.....8 (BOX C-1)

C5. Was this per month, for the year, or for some other period?

PER MONTH.....1
ANNUAL 2
QUARTERLY.....3
SOME OTHER PERIOD (SPECIFY)_____ 4

BOX C-1	® CHECK A20. IF A20=2 OR 3 (INSURANCE PURCHASED THROUGH AN EMPLOYER), CHECK HERE ___ AND ASK QUESTION C6; OTHERWISE GO TO BOX C-2.

C6. Did an employer contribute to the cost of this plan?

YES 1
NO .....2 (BOX C-2)

C7. What was the total premium the employer paid for (PLAN 1) in 1993?

DOLLAR AMOUNT (Specify) $ _____ 1
PAID NOTHING .....2 (BOX C-2)
DON'T KNOW .....8 (BOX C-2)

C8. Was this per month, for the year, or for some other period?

PER MONTH 1
ANNUAL 2
QUARTERLY 3
SOME OTHER PERIOD (SPECIFY)_____ 4

BOX C-2	® CHECK A12. IF A12=5, 6, 7, 8, 9 or 10, (SINGLE SERVICE OR SPECIAL PLAN), CHECK HERE ___ AND GO TO BOX C-12, PAGE 22; OTHERWISE CONTINUE WITH C9.

C9. The next questions are about the plan's benefits, including deductibles, copayments, and covered services.

Did this plan cover both inpatient hospital care and outpatient medical services?

[PROBE: "Did this plan pay any of the cost of a hospital stay or a visit to a doctor?"]

YES, BOTH INPATIENT AND OUTPATIENT 1
NO, COVERS INPATIENT ONLY .....2 ®
NO, COVERS OUTPATIENT ONLY .....3 ®
NO, COVERS NEITHER .....4 (BOX C-12, P. 22)

® **CODE HERE AND ON REFERENCE SHEET.**

BOX C-3	® IF A12=1, (HMO PLANS) CHECK HERE ___ AND ASK C10. OTHERWISE, SKIP TO BOX C-4.

C10. Did this HMO or EPO plan cover services received from providers outside the HM® or EPO, other than referrals from HMO doctors and emergency services outside the HMO area?

YES, COVERS OUTSIDE SERVICES.....1 ®
NO, DOES NOT COVER.....2

® **IF "YES," CHANGE A12 TO "4" ON REFERENCE SHEET.**

BOX C-4	® IF C9 = 2, (INPATIENT ONLY) CHECK HERE ___ AND SKIP TO C14. ® IF C9 = 3, (OUTPATIENT ONLY) CHECK HERE ___ AND SKIP TO C17. OTHERWISE, CONTINUE WITH C11.

C11. **IN C11-C17, READ "FROM PREFERRED PROVIDERS OR PROVIDERS IN THE PLAN" IF ® A12= 2 OR 4 (PPO OR COMBINATION PLAN).**

Did this plan have an annual deductible for basic medical services (from preferred providers or providers in the plan)?

[IF ASKED: "Basic medical services include hospital stays and doctor visits".]

[DON'T COUNT ANY DEDUCTIBLE THAT APPLIES ONLY TO PRESCRIPTION DRUGS, DENTAL OR MENTAL HEALTH SERVICES.]

YES.....1
NO.....2 (BOX C-5A)
DON'T KNOW.....8 (BOX C-5A)

C12. Did the same deductible apply to both inpatient and outpatient services (from preferred providers or providers in the plan)?

YES.....1
NO.....2 (C14)
DON'T KNOW.....8 (C14)

C13. What was the deductible for this plan?

$_____
DOLLAR AMT

BOX C-4A	® IF A12 = 1, 3, 13, OR 98, CHECK HERE _____ AND SKIP TO BOX C-7; OTHERWISE, SKIP TO C19.

C14. Was there a deductible for inpatient services (from preferred providers or providers in the plan)?

YES 1
NO .....2 (BOX C-5)
DON'T KNOW .....8 (BOX C-5)

C15. Was that (inpatient) deductible per hospital admission or for the year?

PER ADMISSION 1
FOR THE YEAR 2

C16. What was that inpatient deductible (using preferred providers or providers in the plan)?

$_____
DOLLAR AMOUNT

BOX C-5	® CHECK C9. IF C9 = 2 (COVERS INPATIENT ONLY), CHECK HERE ___ AND SKIP TO BOX C-5A. OTHERWISE, CONTINUE WITH C17.

C17. Was there an annual deductible for outpatient services (from preferred providers or providers in the plan?)

YES 1
NO .....2 (BOX C-5A)
DON'T KNOW .....8 (BOX C-5A)

C18. What was that outpatient deductible for this plan?

$_____
DOLLAR AMOUNT

BOX C-5A	® IF A12 = 1, 3, 13, OR 18, CHECK HERE _____ AND SKIP TO BOX C-7; OTHERWISE, CONTINUE TO C19.

C19. Did this plan have an annual deductible for basic medical services from non-preferred providers or providers outside the plan?

[IF ASKED: Basic medical services include hospital stays and doctor visits.]

[DON'T COUNT ANY DEDUCTIBLE THAT APPLIES ONLY TO PRESCRIPTION DRUGS, DENTAL OR MENTAL HEALTH SERVICES.]

YES 1
NO .....2 (BOX C-7)
DON'T KNOW .....8 (BOX C-7)

C20. Did the same deductible apply to both inpatient and outpatient services from non-preferred providers or providers outside the plan?

YES 1
NO 2 (C22)
DON'T KNOW 8 (C22)

C21. What was the deductible for this plan?

$_____
DOLLAR AMOUNT

SKIP TO BOX C-7

C22. Was there a deductible for <u>inpatient</u> services (from non-preferred providers or providers outside the plan)?

YES 1
NO .....2 (BOX C-6)
DON'T KNOW .....8 (BOX C-6)

C23. Was that (inpatient) deductible per hospital admission or for the year?

PER ADMISSION 1
FOR THE YEAR 2

C24. What was that inpatient deductible (using non-preferred providers or providers outside the plan)?

$_____
DOLLAR AMOUNT

BOX C-6	® CHECK C9. IF C9 = 2 (COVERS INPATIENT ONLY), CHECK HERE ___ AND SKIP TO BOX C-7. OTHERWISE, CONTINUE WITH C25.

C25. Was there an annual deductible for outpatient services (from non-preferred providers or providers outside the plan?)

YES 1
NO ..... 2 (BOX C-7)
DON'T KNOW ..... 8 (BOX C-7)

C26. What was that outpatient deductible for this plan?

$_____
DOLLAR AMOUNT

BOX C-7	® CHECK C1. IF C1=2 (FAMILY INSURANCE PLAN), CHECK HERE ___ AND CONTINUE WITH C27. OTHERWISE SKIP TO BOX C-8.

C27. What was the maximum deductible to be paid by the family in 1993. (RECORD EITHER A DOLLAR AMOUNT, A NUMBER OF PERSONS, OR BOTH.)

$ _____
MAXIMUM DEDUCTIBLE

OR

_____
NUMBER OF PERSONS MEETING INDIVIDUAL DEDUCTIBLE

OR

NO DEDUCTIBLE 00

BOX C-8	® IF C9=3 OR 4 (INPATIENT SERVICES NOT COVERED), CHECK HERE AND GO TO BOX C-9; OTHERWISE CONTINUE AT C28.

C28. (READ "AFTER THE DEDUCTIBLE HAS BEEN MET" IF ANY DEDUCTIBLE REPORTED FOR PLAN.) (After the deductible had been met), what was the co-insurance rate for basic inpatient services?

[PROBE: After the deductible had been met, what was the inpatient reimbursement rate for basic inpatient service?]

NOT COVERED 01
0% OR NONE.....02
10% or "90-10".....03
15% or "85-15".....04
20% or "80-20".....05
25% or "75-25".....06
30% or "70-30".....07
50% or "50-50".....08
VARIES (SPECIFY)_____09
OTHER (SPECIFY) _____10

BOX C-9	® IF C9=2 OR 4 (OUTPATIENT SERVICES NOT COVERED), CHECK HERE ___ AND GO TO C32; OTHERWISE CONTINUE AT C29.

C29. (After the deductible had been met), did (you/NAME) have to pay anything when (you/he/she) saw a (doctor/preferred provider or provider in the plan)?

[PROBE: After the deductible had been met, but before the maximum out-of-pocket amount.]

YES 1
NO .....2 (BOX C-10)
DON'T KNOW.....8 (BOX C-10)

C30. (After the deductible had been met), how much did (you/NAME) pay when (you/he/she) saw a (doctor/preferred provider or provider in the plan)?

[PROBE: After the deductible had been met, but before the maximum out-of-pocket amount.]

DOLLAR AMOUNT [CO-PAYMENT] (Specify)$ _____ 1 (BOX C-10)
PERCENT [CO-INSURANCE].....2
OTHER (SPECIFY) _____ 3 (BOX C-10)

C31. What was the reimbursement rate?

10% or "90-10" 01
15% or "85-15" 02
20% or "80-20" 03
25% or "75-25" 04
30% or "70-30" 05
50% or "50-50" 06
VARIES (SPECIFY) _____ 07
OTHER (SPECIFY) _____ 08

BOX C-10	® IF A12 = 1,3, 13, OR 18, CHECK HERE ___ AND GO TO C34; OTHERWISE CONTINUE AT C32.

C32. (After the deductible had been met), how much did (you/NAME) pay when (you/he/she) used a non-preferred provider or provider outside the plan?

[PROBE: After the deductible had been met, but before the maximum out-of-pocket amount.]

DOLLAR AMOUNT [CO-PAYMENT] (SPECIFY) $_____ 1 (C34)
PERCENT [CO-INSURANCE] 2
NOT COVERED AT ALL 3 (C34)
OTHER (SPECIFY) _____ 4 (C34)
DON'T KNOW 8 (C34)

C33. What was the reimbursement rate?

10% or "90-10" 01
15% or "85-15" 02
20% or "80-20" 03
25% or "75-25" 04
30% or "70-30" 05
50% or "50-50" 06
VARIES (SPECIFY) _____ 07
OTHER (SPECIFY) _____ 08

C34. Was there a maximum amount that this plan would pay over a lifetime? Do not include limits that apply only to mental health, or to certain diseases such as cancer or AIDS.

$1,000,000 (ONE MILLION DOLLARS) 1
OTHER DOLLAR AMT (SPECIFY) $_____ 2
NO LIFETIME LIMIT 3
OTHER (SPECIFY) _____ 4

C35. Did this plan have a waiting period for pre-existing conditions (for you or your dependents)?

YES [INCLUDE FOR SOME CONDITIONS]	1	
NO	2	C-37
DON'T KNOW	8	C-37

C36. How long did (you/NAME) have to wait to be covered for such problems?

[INTERVIEWER: IF WAITING PERIOD DIFFERED BETWEEN "IN TREATMENT" AND NOT, CHECK HERE ____ AND CODE PERIOD FOR IN TREATMENT.]

DAYS (SPECIFY) _____	1
MONTHS (SPECIFY) _____	2
YEARS (SPECIFY) _____	3
NEVER COVERED	4
VARIES (SPECIFY) _____	5

C37. In 1993, did this plan refuse to cover any family member at all because of a particular health problem or condition?

YES	1
NO	2
NO FAMILY MEMBERS	3

C38. The next questions are about services that may have been covered under this plan in 1993.

Did this plan cover ...

	YES	NO
a. routine mammography screening?	1	2
b. adult routine physical examinations?	1	2
c. routine pap smears?	1	2

C39. Did this plan cover well child care such as ...

	YES	NO
d. childhood immunizations?	1	2
e. other well baby care (routine child care for children under 1 year of age)?	1	2
f. other well child care for children 1-4 years of age?	1	2
g. other well child care for children 5-13 years of age?	1	2

C40. In 1993, did this plan cover outpatient prescription drugs?

YES 1
NO 2 (C44)
DON'T KNOW 8 (C44)

C41. Was there a limit on how much the plan would pay in a year for outpatient prescription drugs?

YES 1
NO 2 (C43)
DON'T KNOW 8 (C43)

C42. What was the dollar limit for outpatient prescription drug coverage?

$_____
DOLLAR LIMIT

C43. Did this plan require that generic drugs be purchased if available?

[PROBE: " 'Generic' drugs use the same formula as brand name drugs and usually cost less than the brand name versions."]

YES 1
NO 2
NO REQUIREMENT, BUT PAID LESS FOR GENERIC 3

C44. In 1993, did this plan cover routine dental care?

YES [INCLUDE "LIMITED"] 1
NO 2

C45. In 1993, did this plan cover orthodontic care other than that required by accident or injury?

YES [INCLUDE "LIMITED"] 1
NO 2

C46. In 1993, did this plan cover routine eye exams?

YES [INCLUDE "LIMITED"] 1
NO 2 (C48)
DON'T KNOW 8 (C48)

C47. Were eyeglasses and contact lenses covered?

YES [INCLUDE "LIMITED"] 1
NO 2

C48. In 1993, was care in a nursing home covered under this plan?

YES 1
NO 2 (C51)
DON'T KNOW 8 (C51)

C49. Was there a limit on the number of days or total dollar amount that would be covered for care received in a nursing home?

YES 1
NO 2 (C51)
DON'T KNOW 8 (C51)

C50. What was the limit for care received in a nursing home? [ENTER ALL THAT APPLY]

_____	$_____	$_____
DAYS	DOLLARS	DOLLARS PER DAY

C51. In 1993, were personal care services in the home covered under this plan?

YES 1
NO 2

C52. In 1993, was home health care covered under this plan?

YES 1
NO 2 (C55)
DON'T KNOW 8 (C55)

C53. Was there a limit on the number of visits or total dollar amount that would be covered for home health care?

YES 1
NO 2 (C55)
DON'T KNOW 8 (C55)

C54. What was the limit for home health care? [ENTER ALL THAT APPLY]

_____ VISITS

$_____ DOLLARS

C55. In 1993, did this plan cover <u>inpatient</u> mental health services?

YES [INCLUDE "LIMITED"] 1
NO 2 (C59)
DON'T KNOW 8 (C59)

C56. Was there a limit on the number of days or the total dollar amount that would be covered for <u>inpatient</u> mental health services?

YES 1
NO 2 (C59)
DON'T KNOW 8 (C59)

C57. Was the limit....

C58. What were the limits? [ENTER ALL THAT APPLY]

	YES	NO		
Per stay?	1	2	_____ DAYS	$_____ DOLLARS
Per year?	1	2	_____ DAYS	$_____ DOLLARS
For an individual's lifetime?	1	2	_____ DAYS	$_____ DOLLARS

C59. In 1993, did this plan cover outpatient mental health services?

YES [INCLUDE "LIMITED"].....1
NO.....2 (C62)
DON'T KNOW.....8 (C62)

C60. Was there a limit on the number of visits or the total dollar amount that would be covered for outpatient mental health services in a year?

[PROBE: Is that a visit limit, dollar limit, or both?]

YES.....1
INCLUDED WITH INPATIENT LIMIT.....2 (C62)
NO.....3 (C62)
DON'T KNOW.....8 (C62)

C61. What was the (visit limit/dollar limit/visit and dollar limits)? [ENTER ALL THAT APPLY]

_____ VISITS

$_____ DOLLARS

C62. In 1993, did this plan cover substance abuse treatment (including either alcohol or drug abuse treatment or both)?

[ENTER YES IF ANY SUBSTANCE ABUSE TREATMENT IS COVERED]

YES 1
NO 2 (C69)
DON'T KNOW 8 (C69)

C63. Was inpatient treatment for substance abuse covered?

YES 1
NO 2 (C66)
DON'T KNOW 8 (C66)

C64. Was there a limit on the number of days or the total dollar amount that would be covered for inpatient substance abuse treatment?

[PROBE: Is that a day limit, a dollar limit, or both?]

YES 1
INCLUDED WITH MENTAL HEALTH LIMITS 2 (C66)
NO 3 (C66)
DON'T KNOW 8 (C66)

C65. What was the (day limit/dollar limit/day and dollar limits)? [ENTER ALL THAT APPLY]

_____ DAYS

$_____ DOLLARS

C66. Was outpatient substance abuse treatment covered?

YES 1
NO 2 (C69)
DON'T KNOW 8 (C69)

C67. Was there a limit on the number of visits or the total dollar amount that would be covered for outpatient substance abuse treatment?

[PROBE: Is that a visit limit, a dollar limit, or both?]

YES	1
INCLUDED WITH PREVIOUSLY REPORTED LIMITS	2 (C69)
NO	3 (C69)
DON'T KNOW	8 (C69)

C68. What was the (visit limit/dollar limit/visit and dollar limits)? [ENTER ALL THAT APPLY]

_____ VISITS

$_____ DOLLARS

C69. DID RESPONDENT USE A BROCHURE OR PAMPHLET TO ANSWER QUESTIONS ABOUT COVERED SERVICES IN THIS SECTION?

YES	1
NO	2
DON'T KNOW	8

BOX C-12	® IF ANY PLANS LISTED IN A10b, CHECK HERE ___ AND USE SUPPLEMENT TO ASK SECTIONS A AND C FOR EACH PLAN OTHERWISE CONTINUE WITH SECTION D

SECTION D

Finally, I have a few more questions about (your/NAME's) business.

D1. How long (have you/has NAME) been primarily self-employed?

_____
OF YEARS

FOR D2 - D7, IF THE PERSON HAS MORE THAN ONE SELF-EMPLOYED BUSINESS, ASK ABOUT THE MAIN BUSINESS.

D2. Is (your/NAME's) business incorporated?

YES 1
NO 2

D3. Is (your/NAME's) business for profit or non-profit?

FOR PROFIT 1
NON-PROFIT 2

D4. In filing Federal income tax for 1993, did (you/NAME) file...

		YES	NO
a.	a Schedule C?	1	2
b.	a Schedule F?	1	2

D5. What is the name and address of (your/NAME's) business?

NAME _____

ADDRESS: _____

CITY/STATE: _____

D6. What kind of business or industry is this? What do (you/NAME) make or do?

_____

_____

_____

_____

D7. What were (your/NAME's) most important activities or duties in this business?

_____

_____

_____

_____

D8. During 1993, how much money did (your/NAME's) business earn after expenses?

IF MORE THAN ONE SELF-EMPLOYED BUSINESS, PROBE FOR AMOUNT EARNED OR LOST FOR ALL BUSINESSES COMBINED.

$ EARNED: $_____

OR,

$ LOST: $_____

CLOSING: On behalf of the U.S. Department of Health and Human Services, thank you very much for your time and cooperation.

Appendix VI

Advance letter to single establishment firms

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
6525 Belcrest Road
Hyattsville, Maryland 20782

Endorsing Organizations:

Business Roundtable

National Association of Manufacturers

Health Insurance Association of America

National Association of Self-Employed Businesses

Society of Professional Benefit Administrators

National Education Association

American Association of School Administrators

American Federation of State, County, and Municipal Employees; AFL-CIO

Dear Employer:

I am writing to ask you to participate in a major national study of the costs of providing health benefits to employees. The National Employer Health Insurance Survey (NEHIS), being conducted by the United States Department of Health and Human Services, will provide essential, objective data to inform the national debate about health care reform. With an average of 1,000 employers randomly selected from each of the fifty States and the District of Columbia, it will also provide information to evaluate reform efforts at the state level.

Although opinions differ on the issue of health care reform, I think you will agree that accurate information about the costs and effects of such plans is essential in making sensible decisions. Shown are some of the groups who have endorsed the survey.

The NEHIS is being conducted by Westat, Inc., a private research firm in Rockville, Maryland. A Westat interviewer will call you soon to ask for your help. The interview will take between 15 and 60 minutes, depending upon whether and what kinds of benefits your company may offer. Enclosed is a list of items that will be included in the survey. If the interviewer calls at an inconvenient time, please ask him or her to call back at the time that is best for you.

Your participation is voluntary, and there is no penalty for not participating. However, because we are talking to only a sample of U.S. employers, your participation is extremely important to the completeness and accuracy of the survey results. If you do participate, you may choose not to answer any specific question. All the information you provide will be held in strict confidence, and will be used for statistical purposes only as required by Section 308(d) of the Public Health Service Act. No individual person or establishment will ever be identified in any statistical summary that is released or published.

I know your time is valuable, but I hope you will find a few minutes to contribute to this important research. The success of the survey and our ability to plan intelligently for the future depends on the cooperation of employers like you.

DATA ITEMS INCLUDED IN THE SURVEY

The interviewer will be asking about health benefits and other information at the location(s) referenced on the attachment to this letter.

The interview will go more quickly and smoothly if you have available plan brochures and any other records that would include the following information.

Information about your business or organization as of December 31, 1993:

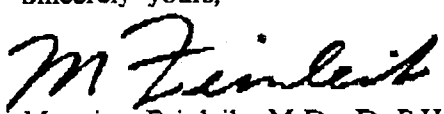
- The number of employees at the referenced location(s)
- The number of full-time, part-time, and temporary or seasonal employees
- Whether your business or organization offers health insurance as a benefit to employees and type(s) of plans offered
- Eligibility requirements for health benefits

Information about each health insurance plan you offered at the referenced location(s) during calendar year 1993 or the most recent plan year ending on or before March 31, 1994:

- Number of employees, former employees (COBRA), and retirees enrolled and their dependents.
- Whether self-insured or fully insured; if self-insured, the costs of stop-loss coverage.
- Total premiums, benefits paid (claims), and administrative costs. *If you do not have this information available, you should be able to obtain it from your insurance company or broker.*
- Per-employee costs, including employer and employee contributions.
- Cost-sharing provisions, including deductibles and co-insurance/co-payments.
- Covered services and their limits, including routine check-ups for adults and children, childhood immunizations, mammograms, Pap smears, prescription drugs, mental health, substance abuse, nursing home care, and home care.

Thank you very much for your help. If you have any questions about the interview, please call 1-800-209-6254 and ask for Sandy Evans.

Sincerely yours,



Manning Feinleib, M.D., Dr.P.H.
Director

Appendix VII

Supervisor monitoring form

Supervisor Monitoring Form

Interviewer _____ |__|__|__|__|__| |__|__| |__|__| |__|__|
NAME INITIALS MO DA YR

Supervisor _____
NAME

Project _____ |__|__|__|__|__|__|
NAME NUMBER

TIME

If Interviewer goes on break

BEGIN |__|__| HR |__|__| MIN AM PM END |__|__|__|__|

BEGIN |__|__| HR |__|__| MIN AM PM END |__|__|__|__|

MONITORED IN THIS SESSION

Sample Characteristics:

- ☐ RDD
- ☐ List HH
- ☐ Business
- ☐ CATI
- ☐ Pretest
- ☐ Other
  (Specify)_____

Interview Type

- ☐ Practice Account
- ☐ Screener
- ☐ Questionnaire
- ☐ Data Retrieval
- ☐ Refusal Conversion
- ☐ Validation
- ☐ Tracing
- ☐ Prompt
- ☐ Language
- ☐ Role Plays
- ☐ Other
  (Specify)_____

	N/A	NO PROB-LEM	NEEDS ATTEN-TION	COMMENTS (IF DIFFICULTY NOTED, PROVIDE Q# AND COMMENTS)	DISCUSSED
1. READING & GENERAL SKILLS					
a Identifies self and reads intro clearly and without pausing					
b. Reads all appropriate phrases and answers categories/reads all screens verbatim					
c Follows skip and box instructions **(PAPER STUDIES ONLY)**					
d. Reads questions clearly with appropriate volume/Correctly pronounces all words					
e. Verifies spelling, address, phone, numbers, and other data as needed					
f. Adjusts pace of interview to accommodate respondent					

	N/A	NO PROB-LEM	NEEDS ATTEN-TION	COMMENTS (IF DIFFICULTY NOTED, PROVIDE Q# AND COMMENTS)	DISCUSSED
2. LISTENING SKILLS AND PROBING					
a. Listens to entire answer					
b. Probes unclear responses.					
c. Remains neutral when probing.					
3. RECORDING					
a. Records information accurately					
b Corrects coding errors					
c. Uses control/Special keys properly					
d. Uses comments appropriately (CONTROL K)					
e. Records result codes correctly					
f. Moved through matrix and selection screens properly and smoothly					
4. HANDLING REFUSALS AND QUESTIONS					
a. Answers respondent questions and objections clearly, confidently, and briefly without hesitation					
b. Offers verification number(s)					
5. TELEPHONE MANNER AND RELATIONSHIP WITH RESPONDENT					
a Is pleasant, confident, and professional					
b. Refrains from giving personal remarks or opinions					
c Accepts emotions and sentiments without becoming personally involved					

COMMENTS: _____

_____

_____

_____

NEHIS FEDERAL/QUASI-FEDERAL DATA ITEMS SHEET

Employees - Needed Data for *each state and the District of Columbia:*

1. Total number of employees in each state as of 12/31/93. _____
2. Total number of *full-time* employees in each state as of 12/31/93, and
   a. Number or percent of (2) eligible for health insurance benefits. _____
   b. Number or percent of (2) enrolled in health insurance. _____
   c. Number or percent of (2) that were temporary or seasonal. _____
   d. Number or percent of (2c) eligible for health insurance benefits. _____
   e. Number or percent of (2c) enrolled in health insurance. _____
3. Total number of *part-time* employees in each state as of 12/31/93, and _____
   a. Number or percent of (3) eligible for health insurance benefits. _____
   b. Number or percent of (3) enrolled in health insurance. _____
   c. Number or percent of (3) that were temporary or seasonal. _____
   d. Number or percent of (3c) eligible for health insurance benefits. _____
   e. Number or percent of (3c) enrolled in health insurance. _____
4. Hours per week an employee has to work to be considered full-time. _____
5. Total # or % of employees who were union members in each state as of 12/31/93. _____
6. Total number of *hourly* employees in each state that earn....
   a. less than $5 per hour ($10,000 per year). _____
   b. at least $5 per hour ($10,000/year) but less than $15/hour ($30,000/year) _____
   c. at least $15 per hour ($30,000/year) _____
7. Total number of *salaried* employees in each state that earn...
   a. less than $5 per hour ($10,000 per year). _____
   b. at least $5 per hour ($10,000/year) but less than $15/hour ($30,000/year) _____
   c. at least $15 per hour ($30,000/year) _____
8. Total payroll (including both hourly and salaried employees) for each state in 1993. _____
9. Total dollar amount or percentage of (8) spent on health benefits (including employee contributions) in each state for 1993. _____
10. The minimum number of hours per week a permanent employee must work to be eligible for health insurance benefits. _____

NEHIS FEDERAL/QUASI-FEDERAL DATA ITEMS SHEET

(continued)

11. The minimum period of time (excluding a waiting period for pre-existing conditions) employee must work before being eligible for health insurance benefits. _____

12. The date of the most recent 12 month health insurance plan year ending before April 1, 1994 _____

13. Whether or not other benefits were offered during 1993 (paid vacation, paid sick leave, long-term disability insurance, life insurance, retirement or pension plan such as a 401K plan, and flexible spending account.) _____

Employees - Needed Data for *each health insurance plan offered* (including any union, trade association, or "pooling" plans that the organization contributes to):

1. Number of active employees enrolled by state as of 12/31/93. _____
2. Number of retirees 65 or older enrolled by state as of 12/31/93. _____
3. Number of retirees under 65 enrolled by state as of 12/31/93. _____
4. Number of former employees enrolled through COBRA or other communication of benefits laws, by state as of 12/31/93. _____
5. Number or percent of (1) with family coverage by state as of 12/31/93. _____
6. Number of dependents of active employees enrolled by state as of 12/31/93. _____
7. Number of dependents of former employees enrolled by state as of 12/31/93. _____
8. Number of dependents of retirees enrolled by state as of 12/31/93. _____
9. Whether the plan is a union plan,. a trade association plans, a plan provided by a "pool" or organizations, or none of these options. _____
10. Type of health plan (HMO, PPO, Conventional such as point of service HMO or open-ended HMO, Dental Only, Vision Only, Prescription Drug Only, Long-Term Care, Dread Disease, or Extra Cash.) _____
11. Whether the plan is self-insured or fully-insured. _____

NEHIS FEDERAL/QUASI-FEDERAL DATA ITEMS SHEET

(continued)

12. The administrator (processor of claims) of plan. _____
13. Total annual premium (or equivalent) by state for 1993. _____
14. Total benefits paid by state for 1993. _____
15. Total administrative costs for claims processing, or a percentage of benefits or premiums paid. (If a dollar amount, it is needed by state.) _____
16. If self-insured, whether premium equivalent included costs of processing claims or just medical claims. _____
17. Total premium (or equivalent) for an active employee with single coverage and how much contributed by the employee in 1993. _____
18. Total premium (or equivalent) for family coverage for a family of four including a spouse and how much contributed by the employee. _____
19. The annual deductible amount for inpatient basic services for single coverage. (If HMO, the amounts for in-plan providers and for providers outside of plan.) _____
20. The annual deductible amount for outpatient services for single coverage. (If HMO, the amounts for in-plan providers and for providers outside the plan.) _____
21. The maximum deductible for family coverage. _____
22. After the deductible was met.....
    a. co-insurance rate for basic inpatient services. _____
    b. employee payment for seeing a doctor (for PPO, preferred provider and for HMO, a doctor in the plan.) _____
    c. for PPO or HMO, employee payment for seeing a non-preferred provider or a doctor outside of the plan. _____
23. The maximum lifetime amount the plan would pay over an employee's lifetime, excluding limits specifically for mental health or certain diseases such as cancer or AIDS. _____
24. The number of active employees refused coverage because of a particular health problem or condition. _____
25. The number of dependents of employees refused coverage because of a particular health problem or condition. _____

NEHIS FEDERAL/QUASI-FEDERAL DATA ITEMS SHEET

(continued)

26. The waiting period for pre-existing conditions for employees or their dependents. _____

27. Whether certain services were covered

    a. adult physical exams _____
    b. routine mammography screening _____
    c. routine pap smears _____
    d. childhood immunizations _____
    e. checkups for children less than 1 year, 1 to 4, or 5 to 13 _____
    f. outpatient prescription drugs (an any annual limit) _____
    g. inpatient mental health services (and any limits) _____
    h. outpatient mental health services (and any limits) _____
    i. inpatient substance abuse treatment (and any limits) _____
    j. outpatient substance abuse treatment (and any limits) _____
    k. routine dental care _____
    l. orthodontic care other than that required by injury _____
    m. routine eye examinations _____
    n. eyeglasses or contact lenses _____
    o. care in a nursing home (and any limits) _____
    p. personal care services in home _____
    q. home health care (and any limits) _____

28. Whether there was a requirement that generic drugs be purchased if available. _____

Appendix IX

National Employer Health Insurance Survey refusal conversion letters

NEHIS Refusal Conversion Letter -- Small Businesses
April 22, 1994

Employer Name
Street Address
City, State, Zip

Dear Employer:

You were recently contacted about the National Employer Health Insurance Survey that Westat is conducting for the U.S. Department of Health and Human Services. The survey is described in more detail in the enclosed letter from Dr. Manning Feinleib. I am writing to urge you to participate in this important national study that will provide timely health insurance information from employers throughout the country.

This survey has received enthusiastic support from numerous trade associations and unions nationwide, including the following:

Health Insurance Association of America	*"Although all of us may not agree on specific aspects of health care reform, we can agree that timely, accurate information from the business community is critical to making intelligent decisions. I hope the response from the business community will make the National Employer Health Insurance Survey a success..."*
The Business Roundtable	*"The study should provide useful information about employer based health insurance coverage for the current debate concerning the reform of our nation's health care system."*
National Association for the Self-Employed	*"This important survey will provide essential information to help us understand the burden on businesses of various health care reform proposals."*
Society of Professional Benefit Administrators	*"...we urge all of our SPBA independent Third Party Administration (TPA) firms and their clients to give the best possible assistance if called upon."*

Our country will soon be making a historic decision about how health care is managed and financed. The National Employer Health Insurance Survey is intended to provide the best information possible to help with that decision.

If you have concerns or questions about this survey, please call Westat at 1-800-209-6254. The success of this survey depends on the cooperation of small businesses like yours all over the country. When the Westat interviewer calls, I hope you will have decided to participate.

Sincerely yours,

Gail S. Poe
Project Officer

NEHIS Refusal Conversion Letter -- Medium and Large Businesses
April 22, 1994

Employer Name
Street Address
City, State, Zip

Dear Employer:

You were recently contacted about the National Employer Health Insurance Survey that Westat is conducting for the U.S. Department of Health and Human Services. The survey is described in more detail in the enclosed letter from Dr. Manning Feinleib. I am writing to urge you to participate in this important national study that will provide timely health insurance information from employers throughout the country.

This survey has received enthusiastic support from numerous trade associations and unions nationwide, including the following:

Health Insurance Association of America	*"Although all of us may not agree on specific aspects of health care reform, we can agree that timely, accurate information from the business community is critical to making intelligent decisions. I hope the response from the business community will make the National Employer Health Insurance Survey a success..."*
The Business Roundtable	*"The study should provide useful information about employer based health insurance coverage for the current debate concerning the reform of our nation's health care system."*
National Association of Manufacturers	*"This important survey will provide essential information to help us understand the burden on businesses of various health care reform proposals."*
Society of Professional Benefit Administrators	*"...we urge all of our SPBA independent Third Party Administration (TPA) firms and their clients to give the best possible assistance if called upon."*

Our country will soon be making a historic decision about how health care is managed and financed. The National Employer Health Insurance Survey is intended to provide the best information possible to help with that decision.

If you have concerns or questions about this survey, please call Westat at 1-800-209-6254. The success of this survey depends on the cooperation of managers like you all over the country. When the Westat interviewer calls, I hope you will have decided to participate.

Sincerely yours,

Gail S. Poe
Project Officer

NEHIS Refusal Conversion Letter -- Governments
April 22, 1994

Employer Name
Street Address
City, State, Zip

Dear Employer:

You were recently contacted about the National Employer Health Insurance Survey that Westat is conducting for the U.S. Department of Health and Human Services. The survey is described in more detail in the enclosed letter from Dr. Manning Feinleib. I am writing to urge you to participate in this important national study that will provide timely health insurance information from employers throughout the country.

This survey has received enthusiastic support from numerous trade associations and unions nationwide, including the following:

American Federation of State, County and Municipal Employees, AFL-CIO	*"The focus of the National Employer Health Insurance Survey on state level, as well as national information, is an extremely important feature of the survey and should provide data which will be very helpful in evaluating both state and national health (care) reform efforts."*
Health Insurance Association of America	*"Although all of us may not agree on specific aspects of health care reform, we can agree that timely, accurate information from the business community is critical to making intelligent decisions. I hope the response from the business community will make the National Employer Health Insurance Survey a success..."*
National Education Association	*"We believe that the information will be useful and urge employers both in the public and private sector to cooperate."*
American Association of School Administrators	*"The information will help you to even better chart the effects of various proposals for changes in the nation's health care policies."*

Our country will soon be making a historic decision about how health care is managed and financed. The National Employer Health Insurance Survey is intended to provide the best information possible to help with that decision.

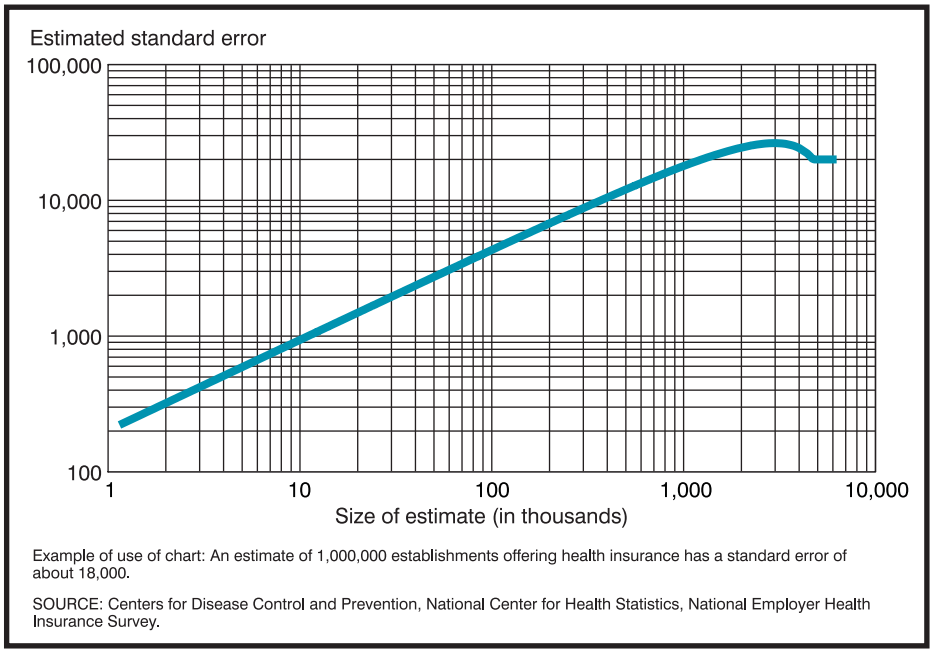
If you have concerns or questions about this survey, please call Westat at 1-800-209-6254. The success of this survey depends on the cooperation of managers and public officials like you all over the country. When the Westat interviewer calls, I hope you will have decided to participate.

Sincerely yours,

Gail S. Poe
Project Officer

Appendix X

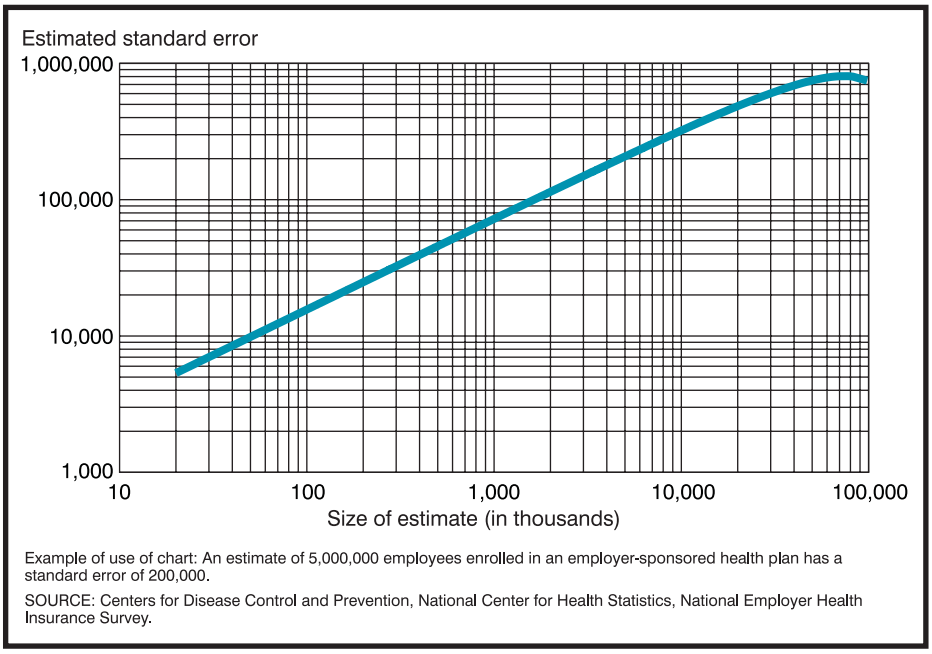
National Employer Health Insurance Survey estimated standard error curves



Example of use of chart: An estimate of 1,000,000 establishments offering health insurance has a standard error of about 18,000.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey.

Figure I. Standard errors for establishment-related totals



Example of use of chart: An estimate of 5,000,000 employees enrolled in an employer-sponsored health plan has a standard error of 200,000.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Employer Health Insurance Survey.

Figure II. Standard errors for employee-related totals

Appendix XI

National Employer Health Insurance Survey reports and papers: 1994–98

National Employer Health Insurance Survey data reports

Park C. What factors explain State variation in the prevalence of employer self-insured health benefits? (In preparation.)

Hing E, Jensen G. Health insurance portability and accountability act of 1996: Lessons from the States. (In preparation.)

Employer-sponsored health insurance: State and national estimates. National Center for Health Statistics, 1997.

National Employer Health Insurance Survey: Selected highlights. National Center for Health Statistics, 1997.

Methodological papers

Hing E, Poe G, Euller R. The effect of methodological differences in two surveys on estimates of the percent of employers sponsoring health insurance. Inquiry. (In preparation.)

Guadagno M. Quality assessment of the 1994 National Employer Health Insurance Survey: Retrospective cognitive interviews with employers. National Center for Health Statistics. 1997.

Hing E, Euller R. Comparability of 1994 National Employer Health Insurance Survey estimates with other employer surveys. Proceedings of the section on government statistics of the 1996 annual meeting of the American Statistical Association. 1996.

Wilson B, Park C, Croner C, et al. Experimentation on the design of State statistical maps: Findings from the NCHS map design laboratory. Presented at the annual meeting of the Population Association of America. 1996.

Allen K, Poe G. Methodological innovations of the 1994 NEHIS. Proceedings of the section on survey methods research of the 1995 annual meeting of the American Statistical Association. 1995.

Hing E, Moss A. Evaluation of item nonresponse for key variables in the 1994 NEHIS. Proceedings of the section on survey methods research of the 1995 annual meeting of the American Statistical Association. 1995.

Edwards S. The effect of respondent level and function on item nonresponse in the 1994 NEHIS. Proceedings of the section on survey methods research of the 1995 annual meeting of the American Statistical Association. 1995.

Statistical and survey design papers

Moriarity C, Gousen S, Chapman D. Generalized variance functions for the 1994 National Employer Health Insurance Survey. Proceedings of the section on survey methods research of the 1997 annual meeting of the American Statistical Association. 1997.

Wallace L, et al. Weighting and estimation procedures for the 1994 NEHIS. Proceedings of the section on survey methods research of the 1995 annual meeting of the American Statistical Association. 1995.

Marker D, Allen B. Unit eligibility and response rates in the 1994 NEHIS. Proceedings of the section on survey methods research of the 1995 annual meeting of the American Statistical Association. 1995.

Chapman D. Evaluation of sampling frames for the 1994 National Employer Health Insurance Survey. Prepared under Centers for Disease Control and Prevention Contract 200–92-0510, Task Order 10. 1995.

Marker D, Bryant E, Moriarity C. National Employer Health Insurance Survey (NEHIS) sample design. Proceedings of the section on survey methods research of the 1994 annual meeting of the American Statistical Association. 1994.

Hing E. Overview of the 1994 National Employer Health Insurance Survey (NEHIS). Proceedings of the section on Government statistics of the 1994 annual meeting of the American Statistical Association. 1994.

National Employer Health Insurance Survey data file documents, papers, and reports

Poe G, Moss A. Funding and expenditures for the National Employer Health Insurance Survey (NEHIS). NEHIS internal document. 1998.

1994 National Employer Health Insurance Survey (NEHIS) Preliminary Establishment Data File Documentation (In-house file documentation). NEHIS Project Staff. National Center for Health Statistics. 1997.

Chapman D, Moriarity C. Disclosure avoidance for the 1994 NEHIS data products. Proceedings of the section on survey methods research of the 1995 annual meeting of the American Statistical Association. 1995.

Chapman D. Recommendations for disclosure avoidance for the National Employer Health Insurance Survey. Prepared under Contract 200–92-0510. Task Order 10. 1995.

DEPARTMENT OF
HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention
National Center for Health Statistics
6525 Belcrest Road
Hyattsville, Maryland 20782-2003

DHHS Publication No. (PHS) 99-1021
8-0816 (4/99)