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National Hospital Discharge Survey, 2002

United States Department of Health and Human Services. National Center for Health Statistics

First ICPSR Version
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Bibliographic Description

ICPSR Study No.: 4166

Title: National Hospital Discharge Survey, 2002

Principal Investigator(s): United States Department of Health and Human Services. National Center for Health Statistics

Series: National Hospital Discharge Survey Series

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Scope of Study

Summary: The National Hospital Discharge Survey (NHDS) collects medical and demographic information annually from a sample of hospital discharge records. Variables include patients' demographic characteristics (sex, age, race, marital status), dates of admission and discharge, source and type of admission, status at discharge, final diagnoses, surgical and nonsurgical procedures, dates of surgeries, and sources of payment. Information on hospital characteristics such as bedsize, ownership, and region of the country is also included. The medical information is coded using the INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM).

Subject Terms: health care facilities, hospitalization, hospitals, illness, medical care, medical evaluation, medical procedures, medical records, patients, payment methods, treatment

Geographic Coverage: United States

Time Period: 2002

Date of Collection: 2002

Universe: Patient discharges from nonfederal short-stay hospitals located in the 50 states and the District of Columbia.

Data Type: administrative records data

Data Collection Notes: (1) Per agreement with NCHS, ICPSR distributes the data file and technical documentation in this collection in their original form as

prepared by NCHS. (2) The codebook is provided as a Portable Document Format (PDF) file. The PDF file format was developed by Adobe Systems Incorporated and can be accessed using PDF reader software, such as the Adobe Acrobat Reader. Information on how to obtain a copy of the Acrobat Reader is provided on the ICPSR Web site.

Methodology

Sample: The redesigned (as of 1988) NHDS sample includes with certainty all hospitals with 1,000 or more beds or 40,000 or more discharges annually. The remaining sample of hospitals is based on a stratified three-stage design. The first stage consists of selection of 112 primary sampling units (PSUs) that comprise a probability subsample of PSUs used in the 1985-1994 National Health Interview Surveys. The second stage consists of selection of noncertainty hospitals from the sample PSUs. At the third stage, a sample of discharges was selected by a systematic random sampling technique. For 2002, the sample consisted of 504 hospitals. Of these, 30 were found to be ineligible. Of the 474 eligible hospitals, 445 hospitals responded to the survey.

Data Source: hospital records

Extent of Processing: FREQ.PR/ DDEF.ICPSR/ REFORM.DOC

Access and Availability

Extent of Collection: 1 data file + machine-readable documentation (PDF) + SAS data definition statements + SPSS data definition statements

Restrictions: In preparing the data file for this collection, the National Center for Health Statistics (NCHS) has removed direct identifiers and characteristics that might lead to identification of data subjects. As an additional precaution, NCHS requires, under Section 308(d) of the Public Health Service Act (42 U.S.C. 242m), that data collected by NCHS not be used for any purpose other than statistical analysis and reporting. NCHS further requires that analysts not use the data to learn the identity of any persons or establishments and that the director of NCHS be notified if any identities are inadvertently discovered. ICPSR member institutions and other users ordering data from ICPSR are expected to adhere to these restrictions.

Data Format: Logical Record Length with SAS and SPSS data definition statements

File Specifications

Part No.	*Part Name*	*File Structure*	*Case Count*	*Variable Count*	*LRECL*	*Records Per Case*
1	Data file	rectangular	327,254	32	88	1

Publications

United States Department of Health and Human Services. National Center for Health Statistics. "Development of the Design of the NCHS Hospital Discharge Survey." VITAL AND HEALTH STATISTICS. PHS Pub. No. 1000, Series 2, No. 39. Public Health Service. Washington, DC: United States Government Printing Office, 1970.

NATIONAL HOSPITAL DISCHARGE SURVEY

2002

PUBLIC USE DATA FILE DOCUMENTATION

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NATIONAL HOSPITAL DISCHARGE SURVEY

2002

PUBLIC USE DATA FILE DOCUMENTATION

Abstract

This document provides information for users of the National Hospital Discharge Survey (NHDS) Public Use Data File for 2002. The NHDS is conducted annually by the National Center for Health Statistics (NCHS) and is a principal source of information on inpatient hospital utilization in the United States.

Section I describes the survey and includes information on the history and scope of the NHDS; the methodology, including data collection and medical coding procedures; population estimates; measurement errors and sampling errors.

Section II provides technical details about the file.

Section III provides a detailed description of the contents of each data record.

Appendix A defines certain terms used in this document;
Appendix B lists the ICD-9-CM Addenda;
Appendix C provides population estimates to allow for the calculation of rates;
Appendix D provides unweighted and weighted frequencies for selected variables; and
Appendix E includes a copy of the NHDS Medical Abstract Form.

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2002 NHDS DATA FILE DOCUMENTATION

I. DESCRIPTION OF THE NATIONAL HOSPITAL DISCHARGE SURVEY

Introduction. This document and its appendices contain information for users of the 2002 National Hospital Discharge Survey (NHDS) public use data file. Conducted annually by the National Center for Health Statistics, NHDS collects medical and demographic information from a sample of discharge records selected from a national sample of non-Federal, short-stay hospitals. The data serve as a basis for calculating statistics on hospital inpatient utilization in the United States. For a brief description of the survey design and data collection procedures, see below. For a more detailed description of the survey design, data collection procedures, and the estimation process, see Reference 1. Publications based on the data for each survey year can be obtained from the NCHS website at: http://www.cdc.gov/nchs/about/major/hdasd/listpubs.htm .

History. To provide more complete and precise information on the utilization of the Nation's hospitals and on the nature and treatment of illness among the hospitalized population, in 1962 the NCHS began exploring possibilities for surveying morbidity in hospitals. A national advisory group was established. The NCHS conducted planning discussions with other officials of the Public Health Service. Hospitalization material from the Survey Research Center of the University of Michigan, the American Hospital Association, and the Professional Activities Study was examined and evaluated. In 1963, a study by the School of Public Health of the University of Pittsburgh under contract to the NCHS demonstrated the feasibility of an NHDS type of program. An additional pilot study using enumerators from the Bureau of the Census was conducted in late 1964 and confirmed the University of Pittsburgh's findings.

Finally, with advice and support from the American Hospital Association, the American Medical Association, individual experts, other professional groups, and officials of the U.S. Public Health Service, the NCHS initiated the National Hospital Discharge Survey in 1964.

SURVEY METHODOLOGY

Source of the Data. The National Hospital Discharge Survey (NHDS) covers discharges from noninstitutional hospitals, exclusive of Federal, military, and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only short-stay hospitals (hospitals with an average length of stay for all patients of less than 30 days) or those whose specialty is general (medical or surgical) or children's general are included in the survey. These hospitals must also have six or more beds staffed for patient use. These criteria, used from 1988 through the current survey year, differ slightly from those used prior to 1988.

Beginning in 1988, the NHDS sampling frame consisted of hospitals that were listed in the April 1987 SMG Hospital Market Database (2), met the above criteria, and began accepting patients by August 1987. The hospital sample was updated in 1991, 1994, 1997, and 2000 to allow for hospitals that opened later or changed their eligibility status since the previous sample update. In 2002, the sample consisted of 504 hospitals. Of the 504 hospitals, 30 were found to be out-of-scope (ineligible) because they went out of business or otherwise failed to meet the criteria for the NHDS universe. Of the 474 in-scope (eligible) hospitals, 445 hospitals responded to the survey.

Sample design and data collection. NCHS has conducted the NHDS continuously since 1965. The original sample was selected in 1964 from a frame of short-stay hospitals listed in the National Master Facility Inventory (NMFI). That sample was updated periodically with samples of hospitals that opened later. Sample hospitals were selected with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals. Within each sampled hospital, a systematic random sample of discharges was selected. A report on the design and development of the original NHDS has been published (3).

In 1988, the NHDS was redesigned to provide geographic sampling comparability with other surveys conducted by the NCHS; to update the sample of hospitals selected into the survey; and to maximize

the use of data collected through automated systems. The hospital sampling frame for the redesigned survey was constructed from the SMG Hospital Market Database (2). Prior to 1988, the NHDS was based on a two-stage sample design. When the survey was redesigned in 1988, a modified, three-stage design was implemented. Units selected at the first stage of sampling consisted of either hospitals or geographic areas, such as counties, groups of counties, or metropolitan statistical areas in the 50 states and the District of Columbia. Within sampled geographic areas, additional hospitals were selected. Finally at the last stage, discharges were selected within the sampled hospitals using systematic random sampling.

These changes in the survey may affect trend data. That is, some of the differences between NHDS statistics based on the 1965-87 sample and statistics based on the sample drawn for the new design may be due to sampling error rather than actual changes in hospital utilization.

Two data collection procedures were used for the survey. The first was a manual system of sample selection and data abstraction, used for approximately 60 percent of the responding hospitals. The second was an automated method, used for approximately 40 percent of the responding hospitals. The automated method involved the purchase of computerized data files from abstracting service organizations, state data systems, or from the hospitals themselves.

In the manual system, the sample selection and the transcription of information from the hospital records to abstract forms were performed at the hospitals. Of the hospitals using this system in 2002, about 27 percent had the work performed by their own medical records staff. In the remaining hospitals using the manual system, personnel of the U.S. Bureau of the Census did the work on behalf of NCHS. The completed forms, along with sample selection control sheets, were forwarded to NCHS for coding, editing, and weighting.

For the automated system, NCHS purchased files containing machine-readable medical record data from which records were systematically sampled by NCHS.

The Medical Abstract Form (Appendix E) and the automated data contain items relating to the personal characteristics of the patient, including birth date or age, sex, race, and marital status, but not name and address; administrative information, including admission and discharge dates, and discharge status; and medical information, including diagnoses and surgical and nonsurgical procedures. Since 1977, patient zip code, expected source of payment, and dates of surgery have also been collected. (Patient date of birth and zip code are confidential information and are not available to the public). Beginning in the 2001 survey year, two additional items were included in the medical abstract form: Type of Admission and Source of Admission. The coding of all variables can be found in section III of this document which describes the record layout.

Medical Coding and Edits. The medical information that was recorded manually on the sample patient abstracts was coded centrally by NCHS staff. A maximum of seven diagnostic codes was assigned for each sample abstract. In addition, if the medical information included surgical or nonsurgical procedures, a maximum of four codes for these procedures was assigned. The system currently used for coding the diagnoses and procedures on the medical abstract forms as well as on the commercial abstracting services data files is the *International Classification of Diseases, 9th Revision, Clinical Modification,* or ICD-9-CM (4).

NHDS usually presents diagnoses and procedures in the order they are listed on the abstract form or obtained from abstract services; however, there are exceptions. For women discharged after a delivery, a code of V27 from the supplemental classification is entered as the first-listed code, with a code designating either normal or abnormal delivery in the second-listed position. In another exception, a decision was made to reorder some acute myocardial infarction diagnoses. If an acute myocardial infarction is listed with other circulatory diagnoses and is other than the first entry, it is reordered to first position. If a symptom appears as a first-listed code and a diagnosis appears as a secondary code, the diagnosis replaces the symptom which is moved back.

Following conversion of the data on the medical abstract to a computer file and combining it with the

automated data files, a final medical edit was accomplished by computer inspection and by a manual review of rejected records. Priority was given to medical information in the editing decision.

A new edit program was developed for the NHDS and was implemented beginning in the 1996 data year. The updated edit program, while following the same general specifications as the previous edit program, was designed to make as few changes as possible in the data. Thus, there may be some minor anomalies in certain areas which would be apparent when examining data over time, performing trend analyses, or examining combinations of variables. Particular features of the new edit program which may affect certain variables are:

< An improved imputation procedure for missing **age** and **sex** data was developed, which maintains the known distribution of these variables, according to categories of the First-Listed Diagnosis.
< There is no longer a re-ordering of the **procedure codes**. However, if the length of stay is missing for a discharge, it is imputed based on the first-listed procedure.
< Principal and additional **expected sources of payment** are no longer re-ordered, with one exception: *Self-Pay* is listed as the principal source only if there are no other sources, or the only other source is *Not Stated*; otherwise it must be listed after every other source (except *Not Stated*).
< An arbitrary **month of admission** is no longer assigned to records received from abstract services which do not provide the exact date of admission and discharge.

Users of the National Hospital Discharge Survey (NHDS) diagnostic and/or procedure data, which is coded to the ICD-9-CM, must take into account the annual ICD-9-CM addendum. The addendum lists new codes, new fourth or fifth digits to existing codes, as well as other modifications. Changes go into effect October 1 of the calendar year. Coding of the 2002 data is consistent with the ICD-9-CM and the addendum which became effective October 1, 2001. Addendum changes for 1986 through 2001 are listed in Appendix B. For more information about the ICD-9-CM visit: http://www.cdc.gov/nchs/icd9.htm .

The Uniform Hospital Discharge Data Set (UHDDS). Starting with 1979 data, the NHDS has followed guidelines of the Uniform Hospital Discharge Data Set (UHDDS) within the confines of its contractual agreement with participating hospitals. The UHDDS is a minimum data set of items uniformly defined (5). These items were selected on the basis of their usefulness to a broad range of organizations and agencies requiring hospital information, uniformity of definition, and general availability from medical records and abstract services.

Population Estimates. Estimates of the civilian population of the United Stated as of July 1, 2002 are presented in Appendix C. These estimates were provided by the U.S. Bureau of the Census, and are based on the 2000 Census. Because of new federal guidelines implemented in the 2000 Census which regulate the reporting of race data, population estimates by race based on the 2000 Census are not directly comparable with estimates from earlier censuses. See Appendix C for further explanation.

Confidentiality. Persons using the public use file agree to abide by the confidentiality restrictions that accompany use of the data. Specifically, they agree that, in the event of inadvertent discovery of the identity of any individual or establishment, then: (a) no use will be made of this knowledge; (b) the director of NCHS will be advised of the incident; (c) the information that would identify the individual or establishment will be safe-guarded or destroyed, as requested by NCHS; and (d) no one else will be informed of the discovered identity.

Maintaining the confidentiality of survey respondents, whether individuals or establishments, is a responsibility of NCHS as described in section 308(d) of the Public Health Service Act. As such it may be necessary for NCHS to block the release of data or modify variables that may, because of their unique nature, lead to inadvertent disclosure of the identity of a participating facility or respondent.

Measurement Errors. As in any survey, results are subject to nonsampling or measurement errors, which include errors due to hospital nonresponse, missing abstracts, information incompletely or inaccurately recorded on abstract forms, and processing errors. A very small proportion, (less than

one-half of one percent) of the discharge records failed to include the sex, age, or date of birth of the patient. If the hospital record did not state either the age or sex of patient, it was imputed by assigning an age or sex value according to the specifications described above. In a very few cases (about a quarter of a percent of the records), the age or sex was edited, because it was inconsistent with the diagnosis. In 2002, data for RACE were missing for 29 percent of the discharges, and no attempt was made to impute for these missing values.

Other edit and imputation procedures may have been applied to data in the NHDS collected in automated form.

Sampling errors and rounding of numbers. The standard error is primarily a measure of sampling variability that occurs by chance because only a sample rather than the entire universe is surveyed. The relative standard error of the estimate is obtained by dividing the standard error by the estimate itself. The resulting value is multiplied by 100, so the relative standard error is expressed as a percent of the estimate. Estimates of sampling variability were calculated with SUDAAN software, which computes standard errors by using a first-order Taylor series approximation of the deviation of estimates from their expected values. A description of the software and the approach it uses was published by Bieler and Williams (6).

Relative Standard Errors for Aggregate Estimates

Parameter values for generalized variance curves needed to calculate approximate relative standard errors for aggregate estimates are presented in Table 1. To derive error estimates that would be applicable to a wide variety of statistics, numerous estimates and their variances were produced. A regression model then used these data to produce best-fit curves, based on an empirically determined relationship between the size of an estimate X and its relative variance. The square root of the relative variance is the relative standard error of an estimate X [RSE(X)] and, using the generalized variance curves, may be calculated from the formula:

$$RSE(X) = SQRT(a + b/X)$$

with a and b provided in Table 1. When multiplied by 100, the RSE(X) is expressed as a percent of X.

For example, in 2002 the estimated number of discharges from short-stay hospitals for children under age 15 with a first-listed diagnosis of asthma (ICD-9-CM code 493) was 187,000. Using the applicable constants from Table 1 for estimates by age produces:

$$RSE(187{,}000) = SQRT(.02110 + (241.964/187{,}000))$$

$$RSE(187{,}000) = .150$$

When multiplied by 100, the relative standard error for the estimate of interest becomes 15.0 percent. The standard error of the estimate is obtained by multiplying the relative standard error by the estimate itself:

$$SE(187{,}000) = 187{,}000 * .150 = 28{,}050$$

The standard error can be used to generate confidence intervals for statistical testing. In this example, the 95% confidence interval for the estimate of children under age 15 with a first-listed diagnosis of asthma is:

$$(187{,}000 - 2*28{,}050) \;<->\; (187{,}000 + 2*28{,}050)$$

$$130{,}900 \;<->\; 243{,}100$$

Relative Standard Error for Estimates of Percents

Approximate relative standard errors for estimates of percents may also be calculated from Table 1. The relative standard error for a percent, 100p (0<p<1), may be calculated using the formula:

$$RSE(p) = SQRT(b * (1 - p)/(p * X))$$

where 100p is the percent of interest, X is the base of the percent, and b is the parameter b in the formula for approximating the RSE(X). The values for b are given in Table 1. When multiplied by 100, the RSE(p) is expressed as a percent of the estimate, p.

For example, in 2002 the estimated number of discharges from short-stay hospitals who were women was 20,338,000. This is 60.3 percent of the estimated 33,727,000 total discharges for that year. Using the applicable constants from Table 1 for estimates by sex produces:

$$RSE(.603) = SQRT(384.179 * (1 - .603) / (.603 * 33,727,000))$$

$$RSE(.603) = .00274$$

When multiplied by 100, the relative standard error for the estimate of interest becomes 0.274 percent. The standard error is obtained by multiplying the relative standard error by the estimate itself:

$$SE(.603) = .603 * .00274 = .0017$$

The standard error can be used to calculate confidence intervals for statistical testing. In this example, the 95% confidence interval for the estimate of the percentage of female inpatients is:

$$(.603 - 2*.0017) \quad <-> \quad (.603 + 2*.0017)$$

$$.600 \quad <-> \quad .606$$

or, equivalently, **60.0% <-> 60.6%**

Relative Standard Error for Ratio Estimators

The approximate RSE of a ratio (X/Y) in which the numerator (X) and the denominator (Y) are both estimated from the same survey, but the numerator is not a subclass of the denominator, is calculated using the formula:

$$RSE(X/Y) = SQRT\ (\ RSE^2\ (X) + RSE^2\ (Y)\ )$$

The approximation is valid if the RSE of the denominator is less than 5 percent or the RSE's of the numerator and denominator are both less than 10 percent. When multiplied by 100, the RSE(X/Y) is expressed as a percent of the ratio estimate, X/Y.

For example, average length of stay (ALOS) is considered a ratio estimator since it is the ratio of days of care to the number of discharges. In 2002, the estimated number of days of care for inpatients with a first-listed diagnosis of septicemia (ICD-9-CM code 038) was 2,849,000. The estimated number of discharges for inpatients with a first-listed diagnosis of septicemia was 341,000. The ALOS for inpatients with a first-listed diagnosis of septicemia was 2,849,000/341,000 = 8.4.

To compute the RSE for ALOS, first compute the RSE for the estimated number of days of care and the RSE for the estimated number of discharges. See the section above on ***Relative Standard Errors for Aggregate Estimates*** for computation of these RSE's.

RSE(2,849,000) = .0555
RSE(341,000) = .0519

Next, substitute those RSE's into the formula above to approximate the RSE for the ALOS estimate:

$$RSE(8.4) = SQRT\ (\ (.0555)^2 + (.0519)^2\ )$$

RSE(8.4) = .0760

The standard error of the estimate is obtained by multiplying the relative standard error by the estimate itself:

SE(8.4) = .0760 * 8.4 = .638

The standard error can be used to generate confidence intervals for statistical testing. In this example, the 95% confidence interval for the estimate of the ALOS for inpatients diagnosed with septicemia is:

(8.4 - 2*.638) <-> (8.4 + 2*.638)

7.1 <-> 9.7

Table 1. Parameter values for generalized variance curves for National Hospital Discharge Survey aggregate statistics by statistic type: United States, 2002

CHARACTERISTIC	FIRST-LISTED DIAGNOSIS		DAYS OF CARE		ALL-LISTED DIAGNOSES		ALL-LISTED PROCEDURES	
	a	b	a	b	a	b	a	b
TOTAL	0.00158	379.947	0.00269	1124.056	0.00164	395.929	0.00242	333.960
SEX								
Male	0.00174	346.105	0.00324	1430.558	0.00179	377.598	0.00296	332.448
Female	0.00157	384.179	0.00917	1881.266	0.00165	405.835	0.00243	331.119
AGE GROUP								
Under 15 years	0.02110	241.964	0.03148	585.935	0.02265	265.264	0.03370	224.177
15-44 years	0.00194	333.180	0.00335	928.419	0.00202	326.273	0.00266	313.905
45-64 years	0.00167	328.374	0.00296	1238.451	0.00178	311.460	0.00293	278.111
65 years and over	0.00181	351.120	0.00325	1753.537	0.00180	403.465	0.00314	280.950
REGION								
Northeast	0.00632	181.435	0.01100	492.047	0.01270	248.829	0.01206	184.247
Midwest	0.01073	270.823	0.01411	757.568	0.01347	210.823	0.02523	320.157
South	0.00272	315.316	0.00452	1125.453	0.00381	312.859	0.00449	286.033
West	0.00450	406.684	0.00828	1336.183	0.00538	498.904	0.00686	408.739
RACE								
White	0.00328	395.233	0.00496	1214.826	0.00333	369.256	0.00577	347.845
Black/African American	0.00559	213.142	0.00858	834.744	0.00526	233.742	0.00631	217.509
All other races	0.02415	191.164	0.03719	590.421	0.02852	253.727	0.02498	171.281
Race not stated	0.01676	224.984	0.02173	428.240	0.02114	155.058	0.01727	224.933
EXPECTED SOURCE OF PAYMENT								
Medicare	0.00189	359.897	0.00345	1707.735	0.00194	400.414	0.00356	250.559
Medicaid	0.00718	320.939	0.01069	923.765	0.00604	331.594	0.00965	237.653
Worker's compensation & other government payments	0.00993	325.814	0.01616	1272.519	0.01227	325.761	0.01167	325.796
HMO/PPO	0.00498	242.924	0.00702	623.505	0.00431	284.866	0.00612	255.188
BC/BS & other private insurance	0.00394	306.593	0.00615	904.019	0.00446	347.031	0.00593	295.779
Self pay	0.00313	304.686	0.00706	932.033	0.00426	296.254	0.00721	220.949
No charge and other	0.04132	185.401	0.04812	661.567	0.03535	203.770	0.04466	201.837

Users of NHDS data are cautioned that computed estimates based on fewer than 30 unweighted records are not reliable and should not be reported. Because these estimates are based on so few data points, they are excluded from the calculation of the generalized variance curves. Thus, application of generalized variance curves is appropriate only for estimates based on at least 30 records.

Presentation of Estimates. Publication of estimates for the NHDS is based on the relative standard error of the estimate and the number of sample records on which the estimate is based (referred to as the sample size). Estimates are not presented in NCHS reports unless a reasonable assumption regarding the probability distribution of the sampling error is possible.

Based on consideration of the complex sample design of the NHDS, the following guidelines are used for presenting the NHDS estimates:

> If the sample size is less than 30, the value of the estimate is not reported.
>
> If the sample size is 30-59, the value of the estimate is reported but should not be assumed reliable.
>
> If the sample size is 60 or more and the relative standard error is less than 30 percent, the estimate is reported.
>
> If the relative standard error of any estimate is over 30 percent, the estimate is considered to be unreliable. It is left to the author to decide whether or not to present it. However, if the author chooses to present the unreliable estimate, the consumer of the statistic must be informed that the statistic is not reliable.

Monthly and Seasonal Estimates Under the New Design. An important difference between the old and new designs is the method used to adjust for nonresponse. In the old design, weights for responding hospitals were adjusted each month to account for hospitals that did not respond for that month. In the new design, the type of nonresponse adjustment applied depended on whether the hospital was considered a nonrespondent or partial respondent. A nonresponding hospital was one which failed to provide at least half of the expected number of discharges for at least half of the months for which it was in-scope. In this case, weights of discharges from hospitals similar to the nonresponding hospital were inflated to account for discharges of the nonrespondent hospital. However, this adjustment was performed just once, after the close out of the survey for the year, instead of monthly as before.

For partially responding hospitals, one or both of two adjustments were made. If the hospital provided at least half, but not all, of the expected number of abstracts for a given month, the weights of the abstracts actually collected for that month were inflated to account for the missing abstracts. If fewer than half of the expected number of abstracts were provided, the weights of the abstracts provided were inflated by a factor of two, then a second adjustment was made to account for the excess nonresponse. In the second adjustment, the weights of the discharges in the hospital's respondent months were inflated by ratios that varied by category of first-listed ICD-9-CM diagnostic code. This adjustment ratio was based on the hospital's month(s) of nonresponse and the month-by-month distributions of first-listed diagnostic groups among discharges from hospitals which responded for all twelve months. The ratio accounts for the seasonality in the occurrence of the first-listed diagnostic groups for annual statistics, but not for partial year estimates. As a result monthly and seasonal estimates may be skewed. While the effect is believed to be small, it is recommended that partial year estimates NOT be produced. In the 2002 NHDS, 94 percent of the 445 responding hospitals provided data for all twelve months, and 99 percent provided at least nine months of data.

How to Use the Data File. The NHDS records are weighted to allow inflation to national or regional estimates. The weight applied to each record is found in location 21-25. To produce an estimate of the number of discharges, the weights for the desired records must be summed. To produce an estimate for number of days of care, the weight must be multiplied by the days of care (location 13-16) and these products are summed. Average length of stay data can be obtained by dividing the days of care by the number of discharges as calculated above.

Appendix D contains weighted and unweighted frequencies for selected variables. These may be used as a cross-check when processing NHDS data.

Diagnosis-Related Groups (DRGs). Many users of the NHDS data have expressed an interest in converting the medical data to DRGs. This has been done using DRG Grouper Programs obtained from the Centers for Medicare and Medicaid Services (formerly HCFA). The DRGs and the DRG Grouper Programs were developed outside of the National Center for Health Statistics; any questions about DRGs, other than specific questions about how they relate to NHDS data, should be addressed elsewhere.

Questions. Questions concerning NHDS data should be directed to:

Centers for Disease Control and Prevention
National Center for Health Statistics
Division of Health Care Statistics
Hospital Care Statistics Branch
3311 Toledo Road
Hyattsville, Maryland 20782
Phone: 301.458.4321
Fax: 301.458.4032
email: NHDS@cdc.gov

For more information about the NHDS, visit our website:
http://www.cdc.gov/nchs/about/major/hdasd/nhds.htm

For email discussions and dissemination of NHDS data, join the Hospital Discharge and Ambulatory Surgery Data listserv (HDAS-DATA). In the body of an email message (leaving the subject line blank), type:

subscribe hdas-data Your Name

Send this message to:
listserv@cdc.gov

REFERENCES

[1]SMG Marketing Group, Inc. Hospital Market Database. Chicago: Healthcare Information Specialists, 1342 North LaSalle Drive, Chicago, IL. 1987, April 1991, April 1994, April 1997, April 2000.

[2]Dennison C, Pokras R. Plan and Operation of the National Hospital Discharge Survey. National Center for Health Statistics. Vital Health Stat 1 (39). 2000. http://www.cdc.gov/nchs/data/series/sr_01/sr01_039.pdf

[3]Simmons WR, Schnack GA. Development of the Design of the NCHS Hospital Discharge Survey. National Center for Health Statistics. Vital Health Stat 2(39). 1977.

[4]International Classification of Diseases, 9th Revision, Clinical Modification, 6th edition. U.S. Department of Health and Humans Services, National Center for Health Statistics, Health Care Financing Administration. 1998.

[5]Office of the Secretary, Department of Health and Human Services: Health Information Policy Council: 1984 Revision of the Uniform Hospital Discharge Data Set. Federal Register, Volume 50, No. 147. July 31, 1985.

[6]Bieler GS, Williams RL. *Analyzing Survey Data Using SUDAAN Release* 7.5. Research Triangle Institute: Research Triangle Park, N.C. 1997.

II. TECHNICAL DESCRIPTION OF DATA FILE

Data Set Name	NHDS02.PU.TXT
Record Length	88
Number of Records	327,254

III. RECORD LAYOUT: Location and Coding of Data Elements

This section provides detailed information for each sampled record on the file, with a description of each item included on the record. Data elements are arranged sequentially according to their physical location on the file. Unless otherwise stated in the Item Description, the data are derived from the abstract form or from automated sources. The SMG Hospital Market Data File and the hospital interview are alternate sources of data; some other items are computer generated.

Item Number	Location	Number of Positions	Item description	Code description
1	1-2	2	Survey Year	02
2	3	1	Newborn status	1=Newborn 2=Not newborn
3	4	1	Units for age	1=Years 2=Months 3=Days
4	5-6	2	Age in years, months, or days	If units=years: 00-99* If units=months: 01-11 If units=days: 00-28 *Ages 100 and over were recoded to 99
5	7	1	Sex	1=Male 2=Female
6	8	1	Race	1=White 2=Black/African American 3=American Indian/Alaskan Native 4=Asian 5=Native Hawaiian or other Pacific Isldr 6=Other 8=Multiple race indicated 9=Not stated
7	9	1	Marital status	1=Married 2=Single 3=Widowed 4=Divorced 5=Separated 9=Not stated
8	10-11	2	Discharge month	01-12=January to December
9	12	1	Discharge Status	1=Routine/discharged home 2=Left against medical advice 3=Discharged/transferred to short-term facility 4=Discharged/transferred to long-term care institution 5=Alive, disposition not stated 6=Dead 9=Not stated or not reported
10	13-16	4	Days of care	Use to calculate number of days of care. Values of zero generated by the computer from admission and discharge dates were changed to one. (Discharges for which dates of admission and discharge are the same are identified in Item Number 11)

Item Number	Location	Number of Positions	Item description	Code description
11	17	1	Length of stay flag	0=Less than 1 day 1=One day or more
12	18	1	Geographic region	1=Northeast 2=Midwest 3=South 4=West
13	19	1	Number of beds, recode	1=6-99 2=100-199 3=200-299 4=300-499 5=500 and over
14	20	1	Hospital ownership	1=Proprietary 2=Government 3=Nonprofit, including church
15	21-25	5	Analysis weight	Use to obtain weighted estimates
16	26-27	2	First two digits of survey year	20
17	28-32	5	Diagnosis code #1	*
18	33-37	5	Diagnosis code #2	*
19	38-42	5	Diagnosis code #3	*
20	43-47	5	Diagnosis code #4	*
21	48-52	5	Diagnosis code #5	*
22	53-57	5	Diagnosis code #6	*
23	58-62	5	Diagnosis code #7	*
24	63-66	4	Procedure code#1	*
25	67-70	4	Procedure code#2	*
26	71-74	4	Procedure code#3	*
27	75-78	4	Procedure code#4	*

Item Number	Location	Number of Positions	Item description	Code description
28	79-80	2	Principal expected source of payment	01=Worker's compensation 02=Medicare 03=Medicaid 04=Other government 05=Blue Cross/Blue Shield 06=HMO/PPO 07=Other private insurance 08=Self-pay 09=No charge 10=Other 99=Not stated
29	81-82	2	Secondary expected source of payment	Same coding as item 28 above, except Not Stated left blank (not coded to 99)
30	83-85	3	Diagnosis-Related Groups (DRG)	Grouper version 18.0
31	86	1	Type of Admission	1 = Emergency 2 = Urgent 3 = Elective 4 = Newborn 9 = Not available
32	87-88	2	Source of Admission	01 = Physician referral 02 = Clinical referral 03 = HMO referral 04 = Transfer from a hospital 05 = Transfer from skilled nursing facility 06 = Transfer from other health facility 07 = Emergency room 08 = Court/law enforcement 09 = Other 99 = Not available

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*Diagnosis and procedure codes are in compliance with the *International Classification of Diseases, 9th Revision, Clinical Modification, (ICD-9-CM)*. For **diagnosis** codes, there is an implied decimal between positions 3 and 4. For E-codes, the implied decimal is between the 4th and 5th position. For inapplicable 4th or 5th digits, a dash is inserted. For **procedure** codes, there is an implied decimal between positions 2 and 3. For inapplicable 3rd or 4th digits, a dash is inserted.

APPENDIX A

DEFINITION OF TERMS

Terms relating to hospitals and hospitalization

Hospitals: Short stay hospitals or hospitals whose specialty is general (medical or surgical), or children's general. Hospitals must have 6 beds or more staffed for patients use. Federal hospitals and hospital units of institutions are not included.

Type of ownership of hospital: The type of organization that controls and operates the hospital. Hospitals are grouped as follows:

> **Not for Profit**: Hospitals operated by a church or another not for profit organization.
>
> **Government**: Hospitals operated by State and local government.
>
> **Proprietary**: Hospitals operated by individuals, partnerships, or corporations for profit.

Patient: A person who is formally admitted to the inpatient service of a short-stay hospital for observation, care, diagnosis, or treatment, or by birth.

Discharge: The formal release of a patient by a hospital; that is, the termination of a period of hospitalization by death or by disposition to place of residence, nursing home, or another hospital. The terms "discharges" and "patients discharged" are used synonymously.

Discharge rate: The ratio of the number of hospital discharges during the year to the number of persons in the civilian population on July 1 of that year.

Days of care: The total number of patient days accumulated at time of discharge by patients discharged from short stay hospitals during a year. A stay of less than 1 day (patient admission and discharge on the same day) is counted as 1 day in the summation of total days of care. For patients admitted and discharged on different days, the number of days of care is computed by counting all days from (and including) the date of admission to (but not including) the date of discharge.

Rate of days of care: The ratio of the number of patient days accumulated at time of discharge to the number of persons in the civilian population on July 1 of that year.

Average length of stay: The total number of days of care accumulated at time of discharge by patients discharged during the year, divided by the number of patients discharged.

Terms relating to diagnoses and procedures

Discharge diagnoses: One or more diseases or injuries (or some factor that influences health status and contact with health services that is not itself a current illness or injury) listed by the attending physician on the medical record of a patient. In the NHDS, discharge (or final) diagnoses listed on the face sheet (summary sheet) of the medical record are transcribed in the order listed. Each sample discharge is assigned a maximum of seven five-digit codes according to ICD-9-CM (4).

Principal diagnosis: The condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.

First-listed diagnosis: The coded diagnosis identified as the principal diagnosis or listed first on the face sheet of the medical record if the principal diagnosis cannot be identified. The number of first-listed diagnoses is equivalent to the number of discharges.

Procedure: One or more surgical or nonsurgical operations, procedures, or special treatments listed by the physician on the medical record. In the NHDS, all terms listed on the face sheet (summary sheet) of the medical record under the caption "operation," "operative procedures," "operations and/or special treatment," and the like are transcribed in the order listed. A maximum of four procedures are coded.

Rate of procedures: The ratio of the number of all-listed procedures during a year to the number of persons in the civilian population on July 1 of that year determines the rate of procedures.

Demographic terms

Age: Refers to the age of the patient on the birthday prior to admission to the hospital inpatient service.

Population: Civilian population is the resident population excluding members of the Armed Forces.

Geographic regions: Hospitals are classified by location in one of the four geographic regions of the United States corresponding to those used by the U.S. Bureau of the Census:

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

APPENDIX B

The *International Classification of Diseases, 9th Revision, Clinical Modification* has been used for coding NHDS data since 1979. The classification system undergoes annual updating, which involves the assignment of new diagnostic and procedure codes, fourth or fifth digit expansion of existing codes, as well as code deletions. Changes are contained in addenda developed by the ICD-9-CM Coordination and Maintenance Committee and approved by the Director of NCHS and the Administrator of the Centers for Medicare and Medicaid Services (formerly HCFA). Addenda to the ICD-9-CM become effective on October 1 of the calendar year and have been released for 1986 through 2002, except for 1999 when there was no addendum due to concerns about possible complications for instituting coding changes prior to the millennium crossover.

As described earlier in this document, the 2002 NHDS involved two data collection modes: manual and automated abstract services. All data collected manually were coded using the third edition of the ICD-9-CM, including addendum changes for 1986 through 2001. Because addendum changes become effective in the last quarter of the calendar year, data collected via abstract services were coded using two different ICD-9-CM revisions. For the first 9 months of 2002, the ICD-9-CM with addendum changes up to October 1, 2001 was used; but for the last 3 months, the October 2002 addendum changes were incorporated. Therefore, to preserve consistent coding across the 12 months and to prevent NHDS data users from mistaking partial year estimates for annual estimates, abstract service data for the last quarter of 2002 were converted back to their previous code assignments under the October 2001 addendum.

In order to assist users, a conversion table is provided which shows the date of introduction of each new code and the previously assigned code equivalent, which had been used for reporting the selected diagnosis or procedure prior to issuance of the new code. This conversion table can be obtained online at the following location: http://www.cdc.gov/nchs/icd9.htm.

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
005.81	1995	005.8
005.89	1995	005.8
007.4	1997	007.8
007.5	2000	007.8
008.00-008.09	1992	008.0
008.43-008.47	1992	008.49
008.61-008.69	1992	008.6
031.2	1997	031.8
038.10	1997	038.1
038.11	1997	038.1
038.19	1997	038.1
041.00-041.03	1992	041.0
041.04	1992	041.0
041.04 (code title restated)	1997	041.04
041.05	1992	041.0
041.09	1992	041.0
041.10-041.19	1992	041.1
041.81-041.85	1992	041.8
041.86	1995	041.84
041.89	1992	041.8
042	1994	042.0-042.2, 042.9*, 043.0-043.3, 043.9*, 044.0, 044.9* (*Codes deleted)
042.0-042.9	1986	279.19
043.0-043.9	1986	279.19
044.0-044.9	1986	279.19
070.20-070.21	1991	070.2
070.22	1994	070.20
070.23	1994	070.21
070.30-070.31	1991	070.3
070.32	1994	070.30
070.33	1994	070.31
070.41-070.43	1991	070.4
070.44	1994	070.41
070.49	1991	070.4
070.51-070.53	1991	070.5
070.54	1994	070.51
070.59	1991	070.5
077.98-077.99	1993	077.9

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
078.10-078.11, 078.19	1993	078.1
078.88	1993	078.89
079.4	1993	079.8
079.50-079.53, 079.59	1993	079.8
079.6	1996	079.89
079.81	1995	079.89
079.88-079.89	1993	079.8
079.98-079.99	1993	079.9
082.40-082.41, 082.49	2000	082.8
088.81, 088.89	1989	088.8
088.82	1993	088.89
099.40-099.49	1992	099.4
099.50-099.59	1992	078.89
112.84-112.85	1992	112.89
114.4-114.5	1993	114.3
176.0-176.9	1991	173.0-173.9
203.00	1991	203.0
203.01	1991	V10.79
203.10	1991	203.1
203.11	1991	V10.79
203.80	1991	203.8
203.81	1991	V10.79
204.00	1991	204.0
204.01	1991	V10.61
204.10	1991	204.1
204.11	1991	V10.61
204.20	1991	204.2
204.21	1991	V10.61
204.80	1991	204.8
204.81	1991	V10.61
204.90	1991	204.9
204.91	1991	V10.61
205.00	1991	205.0
205.01	1991	V10.62
205.10	1991	205.1
205.11	1991	V10.62
205.20	1991	205.2

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
205.21	1991	V10.62
205.30	1991	205.3
205.31	1991	V10.62
205.80	1991	205.8
205.81	1991	V10.62
205.90	1991	205.9
205.91	1991	V10.62
206.00	1991	206.0
206.01	1991	V10.63
206.10	1991	206.1
206.11	1991	V10.63
206.20	1991	206.2
206.21	1991	V10.63
206.80	1991	206.8
206.81	1991	V10.63
206.90	1991	206.9
206.91	1991	V10.63
207.00	1991	207.0
207.01	1991	V10.69
207.10	1991	207.1
207.11	1991	V10.69
207.20	1991	207.2
207.21	1991	V10.69
207.80	1991	207.8
207.81	1991	V10.69
208.00	1991	208.0
208.01	1991	V10.60
208.10	1991	208.1
208.11	1991	V10.60
208.20	1991	208.2
208.21	1991	V10.60
208.80	1991	208.8
208.81	1991	V10.60
208.90	1991	208.9
208.91	1991	V10.60
237.70-237.72	1990	237.7
250.02	1993	250.90
250.03	1993	250.91
250.12	1993	250.10
250.13	1993	250.11
250.22	1993	250.20
250.23	1993	250.21

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
250.32	1993	250.30
250.33	1993	250.31
250.42	1993	250.40
250.43	1993	250.41
250.52	1993	250.50
250.53	1993	250.51
250.62	1993	250.60
250.63	1993	250.61
250.72	1993	250.70
250.73	1993	250.71
250.82	1993	250.80
250.83	1993	250.81
250.92	1993	250.90
250.93	1993	250.91
256.31-256.39	**2001**	**256.3**
275.40-275.42	1997	275.4
275.49	1997	275.4
277.7	**2001**	**277.8**
278.00-278.01	1995	278.0
283.10-283.11,283.19	1993	283.1
285.21-285.22,285.29	2000	285.8
291.81	1996	291.8
291.89	1996	291.8
293.84	1996	293.89
294.10-294.11	2000	294.1
300.82	1996	300.81
305.1	1994	305.10, 305.11*, 305.12, 305.13* (*Codes deleted)
312.81-312.82, 312.89	1994	312.8
315.32	1996	315.39
320.81-320.89	1992	320.8
333.92-333.93	1994	333.99

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
337.20-337.22, 337.29	1993	337.9
337.3	1998	337.9
342.00-342.02	1994	342.0
342.10-342.12	1994	342.1
342.80-342.82	1994	342.9
342.90-342.92	1994	342.9
344.00-344.04, 344.09	1994	344.0
344.30-344.32	1994	344.3
344.40-344.42	1994	344.4
344.81, 344.89	1993	344.8
345.00-345.01	1989	345.0
345.10-345.11	1989	345.1
345.40-345.41	1989	345.4
345.50-345.51	1989	345.5
345.60-345.61	1989	345.6
345.70-345.71	1989	345.7
345.80-345.81	1989	345.8
345.90-345.91	1989	345.9
346.00-346.01	1992	346.0
346.10-346.11	1992	346.1
346.20-346.21	1992	346.2
346.80-346.81	1992	346.8
346.90-346.91	1992	346.9
355.71	1993	354.4
355.79	1993	355.7
371.82	1992	371.89
372.81, 372.89	2000	372.8
374.87	1990	374.89
403.00-403.01	1989	403.0
403.10-403.11	1989	403.1
403.90-403.91	1989	403.9
404.00-404.03	1989	404.0
404.10-404.13	1989	404.1
404.90-404.93	1989	404.9
410.00-410.02	1989	410.0
410.10-410.12	1989	410.1

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
410.20-410.22	1989	410.2
410.30-410.32	1989	410.3
410.40-410.42	1989	410.4
410.50-410.52	1989	410.5
410.60-410.62	1989	410.6
410.70-410.72	1989	410.7
410.80-410.82	1989	410.8
410.90-410.92	1989	410.9
411.81	1989	410.9
411.89	1989	411.8
414.00-414.01	1994	414.0
414.02-414.03	1994	996.03
414.04-414.05	1996	414.00
415.11	1995	997.3 & 415.1
415.19	1995	415.1
429.71	1989	410.0-410.9
429.79	1989	410.0-410.9
433.00-433.01	1993	433.0
433.10-433.11	1993	433.1
433.20-433.21	1993	433.2
433.30-433.31	1993	433.3
433.80-433.81	1993	433.8
433.90-433.91	1993	433.9
434.00-434.01	1993	434.0
434.10-434.11	1993	434.1
434.90-434.91	1993	434.9
435.3	1995	435.0 & 435.1
437.7	1992	780.9
438.0	1997	294.9 & 438
438.10	1997	784.5 & 438
438.11	1997	784.3 & 438
438.12	1997	784.4 & 438
438.19	1997	784.5 & 438
438.20	1997	342.90 & 438
438.21	1997	342.91 & 438
438.22	1997	342.92 & 438
438.30	1997	344.40 & 438
438.31	1997	344.41 & 438

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
438.32	1997	344.42 & 438
438.40	1997	344.30 & 438
438.41	1997	344.31 & 438
438.42	1997	344.32 & 438
438.50-438.52	1997	344.89 & 438
438.53	1998	438.50
438.81	1997	784.69 & 438
438.82	1997	787.2 & 438
438.89	1997	438
438.9	1997	438
440.20-440.22	1992	440.2
440.23	1993	440.20 & 707.1 or 707.8 or 707.9
440.24	1993	440.20 & 785.4
440.29	1993	440.2
440.30-440.32	1994	996.1
441.00-441.03	1994	441.0
441.6	1993	441.1 & 441.3
441.7	1993	441.2 & 441.4
446.20-446.21, 446.29	1990	446.2
451.82-451.84	1993	451.89
458.2	1995	997.9 & 458.9
458.8	1997	458.9
464.00-464.01	**2001**	**464.0**
464.50-464.51	**2001**	**464.0**
466.11	1996	466.1
466.19	1996	466.1
474.0 (code title restated)	1997	474.0
474.00-474.02	1997	474.0
477.1	2000	477.8
482.30-482.39	1992	482.3
482.40	1998	482.4
482.41	1998	482.4
482.49	1998	482.4
482.81-482.83, 482.89	1992	482.8

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
482.84	1997	482.83
483.0	1992	483
483.1	1996	078.88 & 484.8
483.8	1992	483
491.20-491.21	1991	491.2
493.20	1989	493.90
493.21	1989	493.91
493.02	2000	493.00
493.12	2000	493.10
493.22	2000	493.20
493.92	2000	493.90
494.0-494.1	2000	494
512.1	1994	997.3
518.6	1997	518.89
518.81	1987	799.1
518.82-518.89	1987	518.8
518.83	1998	518.81
518.84	1998	518.81
519.00-519.02, 519.09	1998	519.0
521.00-521.09	**2001**	**521.0**
524.00-524.09	1992	524.0
524.10-524.19	1992	524.1
524.60-524.69	1991	524.6
524.70-524.79	1992	524.8
525.10-525.19	**2001**	**525.1**
530.10-530.11, 530.19	1993	530.1
530.12	**2001**	**530.10**
530.81	1993	530.1
530.82-530.84, 530.89	1993	530.8
535.00-535.01	1991	535.0
535.10-535.11	1991	535.1
535.20-535.21	1991	535.2
535.30-535.31	1991	535.3
535.40-535.41	1991	535.4
535.50-535.51	1991	535.5

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
535.60-535.61	1991	535.6
536.3	1994	536.8
536.40-536.42, 536.49	1998	997.4
537.82	1990	537.89
537.83	1991	537.82
556.0-556.6	1994	556
556.8-556.9	1994	556
558.3	2000	558.9
562.02	1991	562.00
562.03	1991	562.01
562.12	1991	562.10
562.13	1991	562.11
564.00-564.09	**2001**	**564.0**
564.81	1998	564.8
564.89	1998	564.8
569.60-569.61	1995	569.6
569.62	1998	569.69
569.69	1995	569.6
569.84	1990	557.1
569.85	1991	569.84
574.60	1996	574.00 & 574.30
574.61	1996	574.01 & 574.31
574.70	1996	574.10 & 574.40
574.71	1996	574.11 & 574.41
574.80	1996	574.00 & 574.10
		574.30 & 574.40
574.81	1996	574.01 & 574.11
		574.31 & 574.41
574.90	1996	574.20 & 574.50
574.91	1996	574.21 & 574.51
575.10-575.11	1996	575.1
575.12	1996	575.0 & 575.1
593.70-593.73	1994	593.7
596.51-596.53	1992	596.5
596.54	1992	344.61
596.55-596.59	1992	596.5

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
599.81-599.89	1992	599.8
600.0-600.3, 600.9	2000	600
602.3	**2001**	**602.8**
608.82	**2001**	**608.83**
608.87	**2001**	**608.89**
645.0	1991	645
645.10-645.11, 645.13	2000	645.00-645.01, 645.03
645.20-645.21, 645.23	2000	645.00-645.01, 645.03
651.30-651.31,651.33	1989	651.00-651.01,651.03
651.40-651.41,651.43	1989	651.10-651.11,651.13
651.50-651.51,651.53	1989	651.20-651.21,651.23
651.60-651.61,651.63	1989	651.80-651.81,651.83
654.20-654.21,654.23	1990	654.2, 654.9
654.90-654.94	1990	654.2, 654.9
655.70 & 655.71	1997	655.8
655.73	1997	655.8
657.0	1991	657
659.60, 659.61, 659.63	1992	659.80-659.81, 659.83
659.70, 659.71, 659.73	1998	656.30, 656.31, 656.33
665.10, 665.11	1992	665.10, 665.11, 665.12, 665.14

Note: The title for the subcategory, 665.1, has been changed, making the fifth-digit subclassification, 665.12 and 665.14, invalid.

670.0	1991	670
672.0	1991	672
677	1994	None
686.00 & 686.01	1997	686.0
686.09	1997	686.0
690.10	1995	690
690.11	1995	691.8 & 704.8
690.12	1995	691.8
690.18	1995	690
690.8	1995	690

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
692.72-692.74	1992	692.79
692.75	2000	692.79
692.76-692.77	**2001**	**692.71**
692.82-692.83	1992	692.89
702.0-702.8	1991	702
702.11,702.19	1994	702.1
704.02	1993	704.09
707.10-707.15, 707.19	2000	707.1
709.00-709.01,709.09	1994	709.0
710.5	1992	288.3,729.1
718.70-718.79	**2001**	**718.80-718.89**
727.83	2000	727.89
728.86	1995	729.4
733.10-733.16, 733.19	1993	733.1
733.93	**2001**	**733.16**
733.94	**2001**	**733.19**
733.95	**2001**	**733.19**
738.10-738.19	1992	738.1
747.60-747.64, 747.69	1993	747.6
747.82	1993	747.89
752.51-752.52	1996	752.5
752.61-752.63	1996	752.6
752.64-752.65	1996	752.8
752.69	1996	752.8
753.10-753.17,753.19	1990	753.1
753.20-753.23	1996	753.2
753.29	1996	753.2
756.70-756.71	1997	756.7
756.79	1997	756.7
758.81	1996	758.8
758.89	1996	758.9

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
759.81-759.82	1989	759.8
759.83	1994	759.89
759.89	1989	759.8
760.75	1991	760.79
760.76	1994	760.79
763.81-763.83, 763.89	1998	763.8
764.00-764.09	1988	764.0
764.10-764.19	1988	764.1
764.20-764.29	1988	764.2
764.90-764.99	1988	764.9
765.00-765.09	1988	765.0
765.10-765.19	1988	765.1
772.10-772.14	**2001**	**772.1**
779.7	**2001**	**772.1**
780.01-780.02	1992	780.0
780.03	1993	780.01
780.09	1992	780.0
780.31	1997	780.3
780.39	1997	780.3
780.57	1992	780.51, 780.53
780.71	1998	780.7
780.79	1998	780.7
781.8	1994	781.9
781.91-781.92	2000	781.9
781.99	2000	781.9
783.21	2000	783.2
783.22	2000	783.4
783.40-783.43	2000	783.4
783.7	2000	783.4
786.03	1998	786.09
786.04	1998	786.09
786.05	1998	786.09
786.06	1998	786.09
786.07	1998	786.09

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
787.01-787.03	1994	787.0
787.91	1995	558.9
787.99	1995	787.9
788.20-788.21, 788.29	1993	788.2
788.30-788.39	1992	788.3
788.41-788.43	1993	788.4
788.61-788.62, 788.69	1993	788.6
789.00-789.07, 789.09	1994	789.0
789.30-789.37, 789.39	1994	789.3
789.40-789.47, 789.49	1994	789.4
789.60-789.67, 789.69	1994	789.6
790.01, 790.09	2000	790.0
790.91	1993	790.9
790.92	1993	286.9
790.93, 790.99	1993	790.9
790.94	1997	790.99
792.5	2000	792.9
793.80-793.81, 793.89	**2001**	**793.8**
795.71	1994	795.8 (Code deleted)
795.79	1994	795.7
795.8	1986	795.7
796.5	1997	796.9
840.7	**2001**	**840.8**
864.05	1992	864.09
864.15	1992	864.19
909.5	1994	909.9
922.31-922.33	1996	922.3
925.1-925.2	1993	925
959.0 (code title restated)	1997	959.0
959.01	1997	854.00
959.09	1997	959.0
965.61	1998	965.6
965.69	1998	965.6

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
989.81-989.84	1995	989.8
989.89	1995	989.8
995.50-995.55	1996	995.5
995.59	1996	995.5
995.60-995.69	1993	995.0
995.7	2000	None
995.80	1996	995.81
995.81 (Code title restated)	1996	995.81
995.82-995.85	1996	995.81
995.86	1998	995.89
996.04	1994	996.09
996.51-996.59	1987	996.5
996.55	1998	996.52
996.56	1998	996.59
996.60-996.69	1989	996.6
996.68	1998	996.69
996.70-996.79	1989	996.7
996.80-996.84	1987	996.8
996.85	1990	996.8
996.86	1987	996.8
996.87	2000	996.89
996.89	1987	996.8
997.00-997.01	1995	997.0
997.02	1995	997.9 & 430-434, 436
997.09	1995	997.0
997.71	**2001**	**997.4**
997.72	**2001**	**997.5**
997.79	**2001**	**997.2**
997.91	1995	997.9
997.99	1995	997.9
998.11-998.12	1996	998.1
998.13	1996	998.89
998.51	1996	998.5
998.59	1996	998.5
998.81-998.82, 998.89	1994	998.8
998.83	1996	998.89
V02.51	1998	V02.5
V02.52	1998	V02.5

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
V02.59	1998	V02.5
V02.60-V02.62	1997	V02.6
V02.69	1997	V02.6
V03.81-V03.82, V03.89	1994	V03.8
V05.3-V05.4	1993	V05.8
V06.5-V06.6	1994	V06.8
V07.31,V07.39	1994	V07.3
V07.4	1992	V07.8
V08	1994	044.9, 795.8 (Codes deleted)
V09.0-V09.91	1993	None
V10.48	1998	V10.49
V10.53	**2001**	**V10.59**
V12.00-V12.03, V12.09	1994	V12.0
V12.40-V12.41	1997	V12.4
V12.49	1997	V12.4
V12.50-V12.52	1995	V12.5
V12.59	1995	V12.5
V12.70-V12.72, V12.79	1994	V12.7
V13.00-V13.01, V13.09	1994	V13.0
V13.61	1998	V13.6
V13.69	1998	V13.6
V15.01-V15.09	2000	V15.0
V15.41-V15.42	1996	V15.4
V15.49	1996	V15.4
V15.82	1994	305.13 (Codes deleted)
V15.84-V15.86	1995	V15.89
V16.40-V16.43	1997	V16.4
V16.49	1997	V16.4
V16.51	1998	V16.5
V16.59	1998	V16.5
V18.61	1998	V18.6

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
V18.69	1998	V18.6
V21.30-V21.35	2000	None
V23.7	1989	V23.8
V23.81	1998	V23.8
V23.82	1998	V23.8
V23.83	1998	V23.8
V23.84	1998	V23.8
V23.89	1998	V23.8
V25.43	1992	V25.49
V25.5	1992	V25.8
V26.21-V26.22, V26.29	2000	V26.2
V26.51	1998	None
V26.52	1998	None
V28.6	1997	V28.8
V29.0-V29.1, V29.8	1992	V71.8
V29.2	1994	V29.8
V29.3	1998	V29.8
V29.8	1992	V71.8
V29.9	1992	V71.9
V30.00-V30.01	1989	V30.0
V31.00-V31.01	1989	V31.0
V32.00-V32.01	1989	V32.0
V33.00-V33.01	1989	V33.0
V34.00-V34.01	1989	V34.0
V35.00-V35.01	1989	V35.0
V36.00-V36.01	1989	V36.0
V37.00-V37.01	1989	V37.0
V39.00-V39.01	1989	V39.0
V42.81-V82.83	1997	V42.8
V42.84	2000	V42.89
V42.89	1997	V42.8
V43.60-V43.66, V43.69	1994	V43.6
V43.81-V43.82	1995	V43.8
V43.83	1998	V43.89
V43.89	1995	V43.8
V44.50	1998	V44.5

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
V44.51	1998	V44.5
V44.52	1998	V44.5
V44.59	1998	V44.5
V45.00	1994	V45.89
V45.01	1994	V45.0
V45.02, V45.09	1994	V45.89
V45.51	1994	V45.5
V45.52, V45.59	1994	V45.89
V45.61	1997	V45.6
V45.63	1997	V45.6
V45.71	1997	611.8
V45.72	1997	569.89
V45.73	1997	593.89
V45.74	2000	593.89, 596.8
V45.75	2000	V45.89
V45.76	2000	518.89
V45.77	2000	602.8, 607.89, 608.89, 620.8, 621.8, 622.8
V45.78	2000	360.89
V45.79	2000	255.8, 289.59, 388.8, 569.49, 577.8, V45.89
V45.82	1994	V45.89
V45.83	1995	V45.89
V45.84	**2001**	**None**
V49.60-V49.67	1994	V49.5
V49.70-V49.77	1994	V49.5
V49.81	2000	None
V49.82	**2001**	**None**
V49.89	2000	V49.8
V50.41-V50.42, V50.49	1994	V50.8
V53.01-V53.02	1997	V53.0
V53.09	1997	V53.0
V53.31	1994	V53.3
V53.32, V53.39	1994	V53.9

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
V56.1	1995	V58.89
V56.1 (code title restated)	1998	V56.1
V56.2	1998	V56.1
V56.31-V56.32	2000	V56.8
V57.21-V57.22	1994	V57.2
V58.41, V58.49	1994	V58.4
V58.61	1995	V67.51
V58.62	1998	V58.69
V58.69	1995	V67.51
V58.81, V58.89	1994	V58.8
V58.82	1995	V58.89
V58.83	2000	V58.89
V59.01-V59.02	1995	V59.0
V59.09	1995	V59.0
V59.6	1995	V59.8
V61.10-V61.12	1996	V61.1
V61.22	1996	V61.21
V62.83	1996	V65.49
V64.4	1997	None
V65.40-V65.45, V65.49	1994	V65.4
V66.7	1996	None
V67.00-V67.01, V67.09	2000	V67.0
V69.0-V69.3	1994	None
V69.8-V69.9	1994	None
V71.81	2000	V71.8
V71.89	2000	V71.8
V72.81-V72.85	1993	V72.8
V73.88-V73.89	1993	V73.8
V73.98-V73.99	1993	V73.9
V76.10-V76.12	1997	V76.1

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
V76.19	1997	V76.1
V76.44	1998	V76.49
V76.45	1998	V76.49
V76.46-V76.47	2000	V76.49
V76.50-V76.52	2000	V76.49
V76.81, V76.89	2000	V76.8
V77.91, V77.99	2000	V77.9
V82.81, V82.89	2000	V82.8
V83.01, V83.02	**2001**	**None**
E854.8	1995	E858.8
E869.4	1994	E869.8
E880.1	1995	E884.9
E884.3-E884.4	1995	E884.2
E884.5-E884.6	1995	E884.9
E885.1-E885.4, E885.9	2000	E885
E888.0	**2001**	**E920**
E888.1	**2001**	**E888**
E888.8-E888.9	**2001**	**E888**
E906.5	1995	E906.3
E908.0-E908.4	1995	E908
E908.8-E908.9	1995	E908
E909.0-E909.4	1995	E909
E909.8-E909.9	1995	E909
E917.3	**2001**	**E917.9**
E917.4	**2001**	**E917.9**
E917.5	**2001**	**E886.0**
E917.6	**2001**	**E917.1**
E917.7	**2001**	**E888**
E917.8	**2001**	**E888**
E920.5	1995	E920.4
E922.4	1997	E917.9

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
E924.2	1995	E924.0
E928.3	2000	E928.8
E955.6	1997	E955.9
E967.2	1996	E967.0
E967.3	1996	None
E967.4-E967.8	1996	E967.1
E968.5	1995	E968.8
E968.6	1997	E968.8
E968.7	2000	E968.8
E985.6	1997	E985.4

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
02.96	1992	89.19
03.90	1987	03.99 (Insertion of Catheter)
05.25	1995	39.7
11.75	1989	11.79
11.76	1989	11.62
20.96-20.98	1986	20.95
22.12	1988	22.11
26.12	1988	26.11
29.31	1991	83.02
29.32	1991	29.3
29.33	1991	29.3
29.39	1991	29.3
31.45	1988	31.43-31.44
31.95	1989	31.75
32.01	1989	32.0
32.09	1989	32.0
32.22	1995	32.29, 32.9
32.28	1989	32.29
33.27	1987	33.22 + 33.27
33.28	1987	33.27
33.29	1987	33.28-33.29
33.50	1995	33.5
33.51	1995	33.5
33.52	1995	33.5
33.6	1990	33.5 + 37.5
34.05	1994	34.99
35.84	1988	35.82
35.96	1986	35.03
36.00-36.03	1986	36.0
36.04	1986	39.97
36.05	1987	36.01
36.05	1986	36.01*, 36.02
36.06	1995	36.01, 36.02, 36.03, 36.05

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
36.09	1986	36.0
36.09	1991	36.00 (Code deleted)
36.17	1996	36.19
36.31	1998	36.3
36.32	1998	36.3
36.39	1998	36.3
37.26-37.27	1988	37.29
37.28	**2001**	**88.72**
37.34	1988	37.33
37.35	1997	37.33
37.65	1995	37.62
37.66	1995	37.62
37.67	1998	37.4
37.70 (Leads only)	1987	37.70 (Leads/Device)
37.71-37.72 (Leads only)	1987	37.74 (Leads/Device)
37.73 (Leads only)	1987	37.73 (Leads/Device)
37.74 (Leads only)	1987	37.76 (Leads/Device)
37.75 (Leads only)	1987	37.89 (Leads/Device)
37.76 (Leads only)	1987	37.81 (Leads/Device)
37.77 (Leads only)	1987	37.83-37.84 (Leads/Device)
37.78	1987	37.71-37.72
37.79	1987	86.09
37.80-37.87	1992	89.49 (Code deleted, this procedure is included in the code for pacemaker insertion/replacement)
37.80 (Device only)	1987	37.73-37.77 (Leads/Device)
37.81 (Device only)	1987	37.73-37.77 (Leads/Device)
37.82 (Device only)	1987	37.73-37.77 (Leads/Device)
37.83 (Device only)	1987	37.73-37.77 (Leads/Device)
37.85-37.87	1987	37.85
37.89	1987	37.86 + 37.89
37.94-37.98	1986	37.99
38.22	1986	38.29
38.44 (Abdominal Aorta Only)	1986	38.44 (Entire Aorta)
38.45 (Thoracic Aorta Added)	1986	38.44-38.45
38.95	1989	38.93
39.28	1991	39.29
39.50	1995	39.59
39.65	1988	39.61
39.66	1990	39.65
39.71	2000	39.52
39.79	2000	39.52

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
39.90	1996	39.50
41.00-41.03	1988	41.0
41.04	1994	99.79
41.05	1997	None
41.06	1997	None
41.07	2000	41.04
41.08	2000	41.05
41.09	2000	41.01
42.25	1988	42.24
42.33	1989	42.32, 42.39
42.33	1990	42.91
43.11	1989	43.1
43.19	1989	43.1, 43.2
43.41	1989	43.41, 43.49
44.21	1986	44.2
44.22	1986	44.99
44.29	1986	44.2
44.32	**2001**	**44.39**
44.43	1989	43.49,45.32
44.44	1989	38.86
44.49	1989	43.0
44.93-44.94	1986	44.99
45.16	1988	45.14 (45.15 before 1987)
45.30	1989	45.31,45.32
45.42	1988	45.41
45.43	1989	45.49
45.75 (Hartmann Resection Added)	1988	48.66 (Code deleted)
45.95	1987	45.93
46.13	1992	46.12 (Code deleted)
46.32	1989	46.39
46.85	1989	46.99
46.97	2000	46.99
47.01	1996	47.0
47.09	1996	47.0
47.11	1996	47.1
47.19	1996	47.1
48.36	1995	45.42
49.31	1989	49.3

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
49.39	1989	49.3
51.10	1989	51.97
51.11	1989	51.11,51.97
51.14	1989	51.12
51.15	1989	51.97
51.21	1996	51.22, 51.23
51.22	1991	51.21 (Code deleted),51.22
51.23	1991	51.22
51.24	1996	51.22, 51.23
51.64	1989	51.69
51.84-51.88	1989	51.97
51.97	1986	52.91,51.99, or 51.82
51.98	1986	51.99
52.13	1989	51.97,52.91
52.14	1989	52.11
52.21	1989	52.2
52.22	1989	52.2
52.84	1996	99.29
52.85	1996	99.29
52.86	1996	99.29
52.93	1989	52.93 + 52.91
52.94	1989	52.09
52.97	1989	52.91
52.98	1989	52.91
52.99	1989	52.93, 52.94, 52.99
54.24	1987	54.23
54.25	1993	54.98
54.51	1996	54.5
54.59	1996	54.5
55.03-55.04	1986	55.02
56.33-56.34	1987	56.33
56.35	1987	45.12
57.17-57.18	1989	57.21
57.22	1989	57.22,57.82
58.31	1990	58.3
58.39	1990	58.3
58.93	1986	57.99
59.03	1996	59.02
59.12	1996	59.11

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
59.72	1995	59.79
59.96	1986	59.95
60.21	1995	60.2
60.29	1995	60.2
60.95	1991	60.99
60.96	2000	60.29
60.97	2000	60.29
64.97	1986	64.95
65.01	1996	65.0
65.09	1996	65.0
65.13	1996	65.12
65.14	1996	65.19
65.23	1996	65.21
65.24	1996	65.22
65.25	1996	65.29
65.31	1996	65.3
65.39	1996	65.3
65.41	1996	65.4
65.49	1996	65.4
65.53	1996	65.51
65.54	1996	65.52
65.63	1996	65.61
65.64	1996	65.62
65.74	1996	65.71
65.75	1996	65.72
65.76	1996	65.73
65.81	1996	65.8
65.89	1996	65.8
66.01	1992	66.0
66.02	1992	66.73
67.51	**2001**	**67.5**
67.59	**2001**	**67.5**
68.15	1987	68.14
68.16	1987	68.13
68.23	1996	68.29
68.51	1996	68.5
68.59	1996	68.5
68.9	1992	68.4
74.3	1992	69.11 (Code deleted)

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
75.37	1998	99.29
75.38	**2001**	**75.34**
77.56	1989	77.89,78.49,81.18
77.57	1989	77.89,80.48,81.18,83.85
77.58	1989	77.59,81.18
78.10	1991	78.40
78.11	1991	78.41
78.12	1991	78.42
78.13	1991	78.43
78.14	1991	78.44
78.15	1991	78.45
78.16	1991	78.46
78.17	1991	78.47
78.18	1991	78.48
78.19	1991	78.49
78.20	1991	78.10,78.20,78.30
78.21	1991	78.11,78.31
78.22	1991	78.12,78.22,78.32
78.23	1991	78.13,78.23,78.33
78.24	1991	78.14,78.34
78.25	1991	78.15,78.25,78.35
78.27	1991	78.17,78.27,78.37
78.28	1991	78.18,78.38
78.29	1991	78.11,78.16,78.19,78.29,78.39
78.39	1991	78.31
78.90**	1987	78.40
78.91**	1987	78.41
78.92**	1987	78.42
78.93**	1987	78.43
78.94**	1987	78.44
78.95**	1987	78.45
78.96**	1987	78.46
78.97**	1987	78.47
78.98**	1987	78.48
78.99**	1987	78.49
80.50-80.59	1986	80.5
81.03	1989	81.02
81.04-81.05	1989	81.03,81.04,81.05
81.06-81.07	1989	81.06,81.07
81.08	1989	81.06,81.07,81.08
81.09	1989	81.08

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
81.30	**2001**	**81.09**
81.31	**2001**	**81.09**
81.32	**2001**	**81.09**
81.33	**2001**	**81.09**
81.34	**2001**	**81.09**
81.35	**2001**	**81.09**
81.36	**2001**	**81.09**
81.37	**2001**	**81.09**
81.38	**2001**	**81.09**
81.39	**2001**	**81.09**
81.40	1989	81.69
81.51	1989	81.51,81.59
81.52	1989	81.61,81.62,81.63,81.64
81.53	1989	81.51,81.59,81.61,81.62, 81.63,81.64
81.54-81.55	1989	81.41 (Code deleted)
81.56	1989	81.48
81.57	1989	81.31,81.39
81.59	1989	81.39
81.72	1989	81.79
81.73-81.74	1989	81.86 (Code deleted)
81.75	1989	81.87 (Code deleted)
81.79	1989	81.79,81.87
81.80	1989	81.81
81.97	1992	81.59
85.95	1987	85.99
85.96	1987	85.99
86.06	1987	86.09
86.07	1990	86.09
86.27	1986	86.22-86.23
86.28	1988	86.22
86.67	1998	86.65
86.93	1987	86.89
88.90	1986	88.39
88.91	1986	89.15
88.92	1986	89.39
88.93	1986	89.15
88.94	1986	89.39
88.95	1986	89.29
88.97	1989	88.99
88.98	1989	88.90
88.99	1986	89.39

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
89.10	1989	89.15
89.17-89.18	1988	89.15
89.19	1989	89.15
89.50	1991	89.54
92.3	1995	01.59, 04.07, 07.63, 07.68
92.30	1998	92.3
92.31	1998	92.3
92.32	1998	92.3
92.33	1998	92.3
92.39	1998	92.3
93.90	1988	93.92
94.61-94.69	1989	94.25
96.29	1998	96.39
96.6	1986	96.35
96.70	1991	93.92 (Code deleted)
96.71	1991	93.92 (Code deleted)
96.72	1991	93.92 (Code deleted)
97.05	1989	51.97
97.44	**2001**	**37.64**
98.51-98.52	1989	59.96 (Code deleted)
98.59	1989	59.96 (Code deleted)
99.00	1995	99.02
99.10	1998	99.29
99.15	1986	99.29
99.20	1998	99.29
99.28	1994	99.25
99.71- 99.79***	1988	99.07
99.75	2000	99.29
99.85	1987	93.35
99.86	1987	93.39
99.88	1988	99.83

*Before October 1986 contents of current code 36.05 would have been assigned to 36.0.

**Codes 78.90-78.99 were retitled as "Insertion of bone growth stimulator" in October 1987; the previous contents of codes 78.90-78.99 were reassigned to codes 78.40-78.49.

***Codes 99.71-99.79 were deleted in October 1987; their contents were not transferred elsewhere. In the October 1988 revision, codes 99.71-99.79 were reclassified as "Therapeutic apheresis." Codes 99.75-99.78 have not yet been reassigned.

APPENDIX C

This appendix provides estimates of the civilian population of the United States as of July 1, 2002. These figures are based on the results of the 2000 Census and were obtained from the U.S. Bureau of the Census, Population Division. All estimates are rounded to thousands.

Three tables are provided:

TABLE 1: Civilian population of the United States, by sex, selected age groups, race, and geographic region

TABLE 2: Civilian population of the United States, by sex, 5-year age groups, and geographic region

TABLE 3: Civilian population of the United States by sex, single-year age groups, and race

In 1997, the Federal Office of Management and Budget (OMB) revised standards that regulated how the Federal government would collect and report data on race and ethnicity in the 2000 Census. In addition to changes in some of the racial categories previously reported, it also permitted respondents to self-identify with more than one racial group. The goal was to improve the accuracy of information on racial diversity in the United States.

The major implication of the new Federal guidelines is that Census 2000 race data are not directly comparable with race data from the 1990 or earlier censuses. A number of new tabulations of racial categories are now available, but the National Hospital Discharge Survey utilizes tabulations based on six race-alone and one multiple race categorization. The six single race-alone groups are White, African-American, American Indian and Alaskan Native, Asian, Native Hawaiian and Other Pacific Islander, and Some Other Race; and the multiple-race category groups together all respondents who identified with two or more races. These categories are mutually exclusive and when summed together add to 100 percent of the US population.

It is not known to what extent these groupings differ from earlier ones where no attempt was made to identify respondents with multi-racial backgrounds. Census cautions that direct comparisons of racial categories from the 1990's to 2000 can not be made, and recommends that the data user decide whether the single race-alone estimate is appropriate for their analysis.

The Census population tables provided in the NHDS data file documentation contain groupings for three primary racial groups: White, Black/African American, and All Other Races. The reason for this is simply that NHDS statistics based on the smaller racial groups (e.g. Asian, American Indian/Alaskan Native, and Native Hawaiian/Other Pacific Islander) often do not meet NCHS standards for reliability of published estimates. Calculating rates with NHDS data by race is complicated by the fact that there is substantial underreporting of race in the survey (29% nonresponse in 2002). Extreme caution should be exercised when using NHDS race data, especially when reporting population-based utilization rates.

The OMB standards discussed above do not apply to how hospitals record patient information in medical records, the source document for the NHDS. As a result, reporting of multiple races in the NHDS is almost non-existent. For the 2002 NHDS, 36 of the 330,000 sample records had more than one race marked and all of these records were from hospitals using the manual data collection method.

TABLE 1: Civilian population of the United States, by sex, age, race, and geographic region: July 1, 2002. Source: U.S. Bureau of the Census, Population Division.

Estimates in thousands

	Total	Male	Female
All ages	287,123	140,598	146,525
White	231,714	114,122	117,593
Black/AfAm	36,513	17,307	19,205
Other	18,896	9,169	9,727
Northeast	54,170	26,200	27,970
Midwest	65,044	31,882	33,162
South	102,600	50,024	52,576
West	65,309	32,492	32,816
Under 15 years	60,646	31,038	29,609
Under 1 year	4,034	2,064	1,970
1 to 4 years	15,575	7,962	7,614
5 to 14 years	41,037	21,013	20,025
White	46,340	23,777	22,564
Black/AfAm	9,504	4,823	4,681
Other	4,802	2,438	2,364
Northeast	10,676	5,464	5,212
Midwest	13,602	6,964	6,638
South	21,664	11,080	10,584
West	14,704	7,530	7,174
15 to 44 years	124,230	62,363	61,866
15 to 24 years	40,059	20,379	19,680
25 to 34 years	39,512	19,847	19,666
35 to 44 years	44,659	22,138	22,521
White	98,295	49,849	48,446
Black/AfAm	16,862	8,077	8,785
Other	9,072	4,438	4,635

	Total	Male	Female
15 to 44 years	124,230	62,363	61,866
Northeast	23,051	11,468	11,584
Midwest	27,952	14,064	13,888
South	44,276	22,082	22,194
West	28,951	14,749	14,201
45 to 64 years	66,645	32,425	34,220
45 to 54 years	40,045	19,642	20,402
55 to 64 years	26,600	12,783	13,817
White	55,759	27,419	28,339
Black/AfAm	7,191	3,278	3,913
Other	3,695	1,728	1,967
Northeast	13,018	6,270	6,747
Midwest	15,192	7,449	7,742
South	23,921	11,570	12,351
West	14,514	7,135	7,379
65 years and over	35,602	14,772	20,830
65 to 74 years	18,274	8,301	9,973
75 to 84 years	12,735	5,081	7,654
85 years and over	4,593	1,390	3,203
White	31,320	13,077	18,244
Black/AfAm	2,956	1,130	1,826
Other	1,326	565	761
Northeast	7,425	2,998	4,427
Midwest	8,298	3,405	4,893
South	12,739	5,292	7,447
West	7,139	3,077	4,062

*The NHDS used the civilian noninstitutionalized population to calculate hospital utilization rates from 1965 through 1980. Beginning in 1981, the civilian resident population has been used to calculate rates. If you have NHDS data files for years before 1981 and used the civilian noninstitutionalized population provided in the documentation to calculate rates, these rates will have to be adjusted to be comparable to 2000 rates using the civilian resident population.

TABLE 2: Civilian population of the United States by sex, age, and geographic region: July 1, 2002.
Source: U.S. Bureau of the Census, Population Division.

Estimates in thousands

Age	UNITED STATES Total	Male	Female	NORTH EAST Total	Male	Female	MIDWEST Total	Male	Female	SOUTH Total	Male	Female	WEST Total	Male	Female
All	287,123	140,598	146,525	54,170	26,200	27,970	65,044	31,882	33,162	102,600	50,024	52,576	65,309	32,492	32,816
0-4	19,609	10,025	9,584	3,332	1,703	1,629	4,338	2,218	2,120	7,142	3,649	3,493	4,797	2,455	2,341
5-9	19,901	10,188	9,713	3,528	1,806	1,722	4,468	2,288	2,180	7,047	3,607	3,440	4,858	2,487	2,371
10-14	21,136	10,825	10,312	3,816	1,955	1,860	4,797	2,458	2,339	7,474	3,824	3,650	5,050	2,587	2,462
15-19	20,268	10,383	9,886	3,610	1,849	1,760	4,712	2,412	2,301	7,203	3,688	3,515	4,743	2,434	2,309
20-24	19,791	9,996	9,795	3,506	1,761	1,744	4,593	2,323	2,269	7,073	3,549	3,524	4,619	2,362	2,257
25-29	18,734	9,439	9,295	3,282	1,630	1,653	4,095	2,069	2,026	6,754	3,376	3,378	4,603	2,365	2,238
30-34	20,778	10,408	10,370	3,891	1,920	1,971	4,526	2,276	2,250	7,414	3,681	3,733	4,947	2,530	2,416
35-39	21,748	10,805	10,942	4,285	2,107	2,178	4,804	2,395	2,409	7,728	3,807	3,921	4,930	2,496	2,434
40-44	22,911	11,333	11,578	4,477	2,200	2,277	5,221	2,589	2,632	8,104	3,982	4,122	5,108	2,562	2,547
45-49	21,271	10,465	10,806	4,120	2,014	2,106	4,898	2,429	2,469	7,518	3,673	3,845	4,734	2,349	2,386
50-54	18,773	9,177	9,596	3,660	1,771	1,889	4,302	2,122	2,179	6,672	3,241	3,431	4,139	2,042	2,097
55-59	14,989	7,259	7,730	2,969	1,419	1,550	3,358	1,638	1,720	5,436	2,623	2,813	3,226	1,578	1,647
60-64	11,611	5,524	6,087	2,268	1,065	1,202	2,634	1,260	1,374	4,295	2,032	2,262	2,414	1,166	1,249
65-69	9,581	4,439	5,142	1,882	862	1,020	2,150	995	1,155	3,586	1,655	1,931	1,963	927	1,036
70-74	8,693	3,862	4,832	1,792	781	1,012	2,004	889	1,115	3,171	1,406	1,765	1,726	786	940
75-79	7,420	3,071	4,349	1,568	633	935	1,736	721	1,015	2,617	1,079	1,538	1,499	639	860
80-84	5,314	2,010	3,305	1,162	426	736	1,266	467	800	1,824	689	1,135	1,061	428	633
0-14	60,646	31,038	29,609	10,676	5,464	5,212	13,602	6,964	6,638	21,664	11,080	10,584	14,704	7,530	7,174
15-44	124,230	62,363	61,866	23,051	11,468	11,584	27,952	14,064	13,888	44,276	22,082	22,194	28,951	14,749	14,201
45-64	66,645	32,425	34,220	13,018	6,270	6,747	15,192	7,449	7,742	23,921	11,570	12,351	14,514	7,135	7,379
15+	226,476	109,560	116,916	43,494	20,736	22,758	51,442	24,918	26,523	80,936	38,944	41,992	50,604	24,962	25,642
45+	102,247	47,197	55,050	20,443	9,268	11,175	23,490	10,854	12,636	36,660	16,862	19,799	21,653	10,213	11,441
65+	35,602	14,772	20,830	7,425	2,998	4,427	8,298	3,405	4,893	12,739	5,292	7,447	7,139	3,077	4,062
75+	17,328	6,471	10,857	3,751	1,356	2,395	4,144	1,521	2,623	5,982	2,230	3,752	3,451	1,364	2,087
85+	4,593	1,390	3,203	1,021	297	724	1,142	334	808	1,540	462	1,078	891	297	593

TABLE 3: Civilian Population of the United States by sex, age, and race: July 1, 2002.
Source: U.S. Bureau of the Census, Population Division.

Estimates in thousands

	ALL RACES			WHITE			BLACK			OTHER		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
ALL AGES	287,123	140,598	146,525	231,714	114,122	117,593	36,513	17,307	19,205	18,896	9,169	9,727
0-4	19,609	10,025	9,584	14,964	7,667	7,296	2,999	1,523	1,476	1,647	835	812
0	4,034	2,064	1,970	3,074	1,575	1,500	628	320	308	332	169	162
1	4,042	2,064	1,979	3,080	1,575	1,504	629	319	310	334	170	164
2	3,874	1,984	1,891	2,968	1,523	1,445	577	293	284	330	167	162
3	3,820	1,951	1,869	2,915	1,494	1,421	579	293	285	327	165	162
4	3,839	1,963	1,876	2,927	1,501	1,426	587	298	289	325	164	161
5-9	19,901	10,188	9,713	15,189	7,798	7,391	3,121	1,584	1,537	1,591	806	785
5	3,832	1,959	1,873	2,927	1,501	1,426	584	296	288	321	162	159
6	3,935	2,014	1,920	3,012	1,546	1,465	602	306	296	321	162	159
7	3,973	2,034	1,939	3,033	1,557	1,476	621	315	306	318	162	157
8	4,043	2,070	1,973	3,081	1,582	1,499	647	328	319	315	160	155
9	4,118	2,109	2,009	3,136	1,611	1,526	667	339	329	315	160	155
10-14	21,136	10,825	10,312	16,188	8,311	7,876	3,384	1,716	1,668	1,565	797	768
10	4,211	2,155	2,056	3,212	1,647	1,564	683	347	336	316	161	155
11	4,283	2,193	2,090	3,275	1,681	1,594	691	351	340	317	161	155
12	4,313	2,210	2,103	3,298	1,695	1,603	698	354	344	316	161	155
13	4,214	2,159	2,055	3,232	1,660	1,572	671	340	331	311	159	152
14	4,117	2,108	2,009	3,171	1,628	1,543	641	325	316	305	155	150
15-19	20,268	10,383	9,886	15,735	8,085	7,650	3,057	1,550	1,506	1,476	747	729
15	4,091	2,095	1,996	3,164	1,624	1,540	629	319	310	298	151	147
16	4,082	2,093	1,989	3,164	1,627	1,537	623	315	307	295	150	145
17	4,072	2,091	1,982	3,165	1,629	1,536	612	312	300	295	150	145
18	4,020	2,061	1,958	3,124	1,607	1,517	601	305	296	294	149	146
19	4,004	2,043	1,960	3,118	1,597	1,521	592	299	293	294	148	146
20-24	19,790	9,996	9,795	15,449	7,871	7,578	2,870	1,398	1,472	1,471	726	745
20	4,020	2,035	1,985	3,132	1,594	1,538	589	292	297	298	149	150
21	4,056	2,043	2,013	3,158	1,603	1,556	596	291	305	302	149	152
22	4,037	2,035	2,002	3,150	1,602	1,548	589	286	303	298	147	151
23	3,878	1,961	1,916	3,031	1,549	1,481	560	271	289	288	141	146
24	3,800	1,921	1,879	2,978	1,524	1,454	537	258	279	285	139	146
25-29	18,734	9,439	9,295	14,641	7,483	7,158	2,541	1,202	1,339	1,552	754	798
25	3,711	1,875	1,836	2,910	1,491	1,419	513	244	269	288	140	148
26	3,711	1,874	1,838	2,903	1,487	1,416	507	241	266	301	146	155
27	3,769	1,902	1,867	2,945	1,508	1,437	508	240	268	317	154	163
28	3,735	1,878	1,857	2,918	1,490	1,429	500	235	265	316	153	163
29	3,808	1,911	1,898	2,965	1,508	1,457	514	242	272	329	160	169
30-34	20,778	10,408	10,370	16,420	8,333	8,087	2,718	1,276	1,442	1,641	798	842
30	4,028	2,020	2,008	3,154	1,604	1,551	538	253	285	336	163	173
31	4,215	2,106	2,108	3,325	1,685	1,640	553	258	295	336	163	173
32	4,350	2,185	2,165	3,441	1,752	1,690	568	267	301	340	166	174
33	4,134	2,071	2,063	3,280	1,663	1,617	532	250	282	322	157	165
34	4,052	2,026	2,026	3,219	1,630	1,589	526	247	279	307	148	158

	ALL RACES			WHITE			BLACK			OTHER		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
35-39	21,748	10,805	10,942	17,412	8,753	8,658	2,824	1,318	1,506	1,512	734	779
35	4,049	2,017	2,033	3,228	1,628	1,600	527	246	281	294	143	151
36	4,185	2,084	2,101	3,335	1,681	1,654	553	259	294	298	145	153
37	4,459	2,223	2,236	3,562	1,797	1,764	587	275	313	310	151	159
38	4,533	2,245	2,288	3,642	1,825	1,818	583	271	311	308	149	159
39	4,520	2,237	2,284	3,645	1,823	1,822	573	267	306	302	146	156
40-44	22,911	11,333	11,578	18,638	9,323	9,315	2,852	1,332	1,521	1,421	679	742
40	4,566	2,262	2,304	3,703	1,855	1,848	572	266	306	291	141	151
41	4,589	2,266	2,322	3,731	1,863	1,867	572	267	305	286	136	149
42	4,703	2,333	2,370	3,816	1,915	1,901	595	279	316	292	140	153
43	4,519	2,232	2,287	3,683	1,840	1,843	558	260	298	278	132	146
44	4,534	2,239	2,295	3,705	1,849	1,856	555	260	295	274	130	144
45-49	21,271	10,465	10,806	17,489	8,703	8,786	2,513	1,166	1,347	1,270	596	674
45	4,438	2,188	2,250	3,633	1,812	1,821	538	251	287	267	126	141
46	4,342	2,137	2,205	3,557	1,771	1,786	522	243	280	263	123	140
47	4,320	2,130	2,190	3,544	1,768	1,776	515	239	276	260	122	138
48	4,153	2,040	2,113	3,427	1,702	1,725	482	223	258	244	115	129
49	4,018	1,970	2,049	3,328	1,650	1,677	455	210	246	235	110	126
50-54	18,773	9,177	9,596	15,631	7,729	7,902	2,071	950	1,121	1,072	498	573
50	3,926	1,923	2,003	3,261	1,616	1,645	441	202	239	224	105	120
51	3,756	1,837	1,919	3,112	1,540	1,572	427	196	231	217	101	117
52	3,778	1,849	1,929	3,123	1,547	1,576	431	199	233	224	104	120
53	3,632	1,772	1,860	3,026	1,494	1,532	397	182	216	208	97	111
54	3,681	1,796	1,885	3,109	1,532	1,576	374	171	203	198	92	106
55-59	14,989	7,259	7,730	12,742	6,234	6,509	1,471	663	808	776	363	414
55	3,516	1,714	1,803	2,995	1,475	1,520	337	154	184	184	85	99
56	3,084	1,498	1,586	2,614	1,283	1,331	307	139	168	163	76	87
57	2,807	1,359	1,449	2,369	1,158	1,211	287	129	157	152	71	81
58	2,813	1,358	1,455	2,395	1,168	1,227	275	123	152	142	66	76
59	2,768	1,331	1,437	2,369	1,150	1,219	265	118	147	135	63	72
60-64	11,611	5,524	6,087	9,897	4,754	5,143	1,137	499	638	577	271	306
60	2,636	1,263	1,373	2,256	1,092	1,165	251	111	140	128	60	68
61	2,365	1,127	1,238	2,013	968	1,044	233	103	130	120	56	64
62	2,288	1,088	1,200	1,940	931	1,009	231	101	129	117	55	62
63	2,190	1,038	1,152	1,868	894	974	214	93	121	108	51	57
64	2,132	1,008	1,124	1,820	868	951	209	91	118	104	49	55
65-69	9,581	4,439	5,142	8,204	3,841	4,362	931	397	535	446	202	244
65	2,020	949	1,071	1,725	818	907	197	85	112	98	45	52
66	1,980	923	1,057	1,694	798	896	193	83	110	94	43	51
67	1,947	903	1,044	1,664	780	884	192	82	110	91	41	50
68	1,834	843	991	1,575	732	843	176	74	102	83	37	46
69	1,800	821	978	1,546	714	833	173	72	101	80	35	45
70-74	8,693	3,862	4,832	7,608	3,416	4,192	738	296	442	347	149	199
70	1,794	813	981	1,558	714	844	161	66	95	75	33	43
71	1,772	795	977	1,551	704	847	149	61	88	72	31	41
72	1,765	784	981	1,542	692	850	151	61	90	72	31	41
73	1,691	743	948	1,483	659	824	142	56	86	65	28	38
74	1,671	726	945	1,473	647	826	135	53	83	63	27	36

	ALL RACES			WHITE			BLACK			OTHER		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
75-79	7,420	3,071	4,349	6,589	2,749	3,840	576	215	361	255	107	148
75	1,611	689	922	1,424	615	809	129	50	80	58	24	34
76	1,544	648	896	1,366	579	787	123	46	77	54	23	32
77	1,512	624	889	1,343	558	785	118	44	74	52	22	30
78	1,431	582	849	1,277	523	755	107	39	67	47	20	27
79	1,322	529	793	1,180	475	705	99	36	63	43	18	25
80-84	5,314	2,010	3,305	4,779	1,816	2,963	378	129	249	157	64	93
80	1,272	500	772	1,141	451	690	92	33	59	39	16	23
81	1,194	461	733	1,077	418	659	82	29	54	35	14	21
82	1,037	389	648	928	350	578	77	26	51	32	13	19
83	967	356	610	869	322	548	70	24	46	27	11	16
84	844	303	540	764	276	488	57	18	38	23	9	14
85-89	2,943	965	1,978	2,662	876	1,785	203	60	143	78	29	49
85	745	259	486	674	235	438	51	16	35	21	8	13
86	664	224	440	602	204	398	44	13	31	18	7	11
87	586	190	396	530	173	358	40	12	28	16	6	10
88	510	159	351	461	144	317	36	10	26	13	5	8
89	438	132	305	395	120	275	32	9	23	11	4	7
90-94	1,250	339	911	1,125	303	822	93	24	69	32	12	20
90	363	106	258	328	95	233	26	7	19	9	4	6
91	300	83	217	270	75	195	22	6	16	8	3	5
92	245	65	180	219	57	162	19	5	14	6	2	4
93	190	48	142	172	43	129	14	3	10	5	2	3
94	152	37	115	137	33	104	11	3	9	4	1	2
95-99	342	75	267	304	65	238	30	7	23	9	3	6
95	116	27	89	104	24	80	9	2	7	3	1	2
96	87	19	68	78	17	61	7	2	6	2	1	1
97	63	14	49	56	12	44	6	1	4	2	1	1
98	45	9	36	39	8	32	4	1	3	1	0	1
99	31	6	25	27	5	22	3	1	2	1	0	1
100+	59	11	47	49	9	40	7	2	6	2	1	2
0 to 14	60,646	31,038	29,609	46,340	23,777	22,564	9,504	4,823	4,681	4,802	2,438	2,364
15 to 44	124,230	62,363	61,866	98,295	49,849	48,446	16,862	8,077	8,785	9,072	4,438	4,635
45 to 64	66,645	32,425	34,220	55,759	27,419	28,339	7,191	3,278	3,913	3,695	1,728	1,967
15+	226,476	109,560	116,916	185,374	90,345	95,029	27,009	12,484	14,525	14,093	6,731	7,362
45+	102,247	47,197	55,050	87,079	40,496	46,583	10,147	4,407	5,739	5,021	2,293	2,728
65+	35,602	14,772	20,830	31,320	13,077	18,244	2,956	1,130	1,826	1,326	565	761
75+	17,328	6,471	10,857	15,509	5,819	9,690	1,286	437	849	533	215	318
85+	4,593	1,390	3,203	4,140	1,254	2,886	332	92	240	121	44	77

APPENDIX D

UNWEIGHTED FREQUENCIES FOR SELECTED VARIABLES

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
SURVEY YEAR			
2002	35,195	292,059	327,254
UNITS			
YEARS	.	284,159	284,159
MONTHS	.	5,358	5,358
DAYS	35,195	2,542	37,737
AGE			
U15 YEARS	35,195	25,388	60,583
15-44 YEARS	.	94,049	94,049
45-64 YEARS	.	67,268	67,268
65 YEARS &UP	.	105,354	105,354
SEX			
MALE	18,114	115,655	133,769
FEMALE	17,081	176,404	193,485
RACE			
WHITE	16,632	151,391	168,023
BLACK/AFRICAN AMERICAN	4,485	42,181	46,666
AMERICAN INDIAN//ALASKAN NATIVE	164	919	1,083
ASIAN	318	1,682	2,000
NATIVE HAWAIIAN/OTH PACIFIC ISLANDER	46	339	385
OTHER	2,083	12,009	14,092
MULTIPLE RACE	5	31	36
NOT STATED	11,462	83,507	94,969
MARSTAT			
MARRIED	41	46,216	46,257
SINGLE	12,826	30,153	42,979
WIDOWED	.	14,942	14,942
DIVORCED	2	6,287	6,289
SEPARATED	2	1,203	1,205
NOT STATED	22,324	193,258	215,582
DISCHARGE STATUS			
ROUTINE	34,162	230,020	264,182
LEFT AGAINST MEDICAL ADVICE	9	2,849	2,858
SHORT-TERM TRANSFER	387	9,081	9,468
LONG-TERM TRANSFER	14	24,710	24,724
ALIVE, OTHER	482	16,942	17,424
DEAD	116	6,951	7,067
NOT STATED	25	1,506	1,531
LOSFLAG			
LESS THAN 1 DAY	320	5,485	5,805
ONE DAY OR MORE	34,875	286,574	321,449

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
REGION			
NORTHEAST	7,063	69,345	76,408
MIDWEST	9,617	88,909	98,526
SOUTH	12,100	97,752	109,852
WEST	6,415	36,053	42,468
BEDSIZE			
6-99	2,965	36,382	39,347
100-199	8,698	67,039	75,737
200-299	8,223	62,186	70,409
300-499	11,104	91,123	102,227
500&UP	4,205	35,329	39,534
OWNERSHIP			
PROPRIETARY	2,641	22,195	24,836
GOVERNMENT	3,200	26,248	29,448
NOT FOR PROFIT	29,354	243,616	272,970
PRINCIPAL EXPECTED SOURCE OF PAYMENT			
WORKER'S COMPENSATION	11	1,560	1,571
MEDICARE	.	107,714	107,714
MEDICAID	10,746	41,812	52,558
OTHER GOVERNMENT PAYMENT	300	2,952	3,252
BLUE CROSS/BLUE SHIELD	4,754	27,913	32,667
HMO/PPO	11,414	55,378	66,792
OTHER PRIVATE/COMMERCIAL INSUR	4,954	31,492	36,446
SELF PAY	1,336	11,599	12,935
NO CHARGE	24	1,733	1,757
OTHER	1,107	6,055	7,162
SOURCE NOT STATED	549	3,851	4,400
DISCHARGE MONTH			
JANUARY	2,873	25,130	28,003
FEBRUARY	2,677	23,751	26,428
MARCH	3,078	25,810	28,888
APRIL	2,836	24,602	27,438
MAY	2,944	25,350	28,294
JUNE	3,006	23,860	26,866
JULY	3,089	24,409	27,498
AUGUST	3,177	24,786	27,963
SEPTEMBER	3,051	23,492	26,543
OCTOBER	2,882	24,258	27,140
NOVEMBER	2,780	23,319	26,099
DECEMBER	2,802	23,292	26,094
TYPE OF ADMISSION			
EMERGENCY	.	96,175	96,175
URGENT	.	52,994	52,994
ELECTIVE	.	56,128	56,128
NEWBORN	35,195	.	35,195
NOT STATED	.	86,762	86,762

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
SOURCE OF ADMISSION			
PHYSICIAN REFERRAL	.	78,580	78,580
CLINICAL REFERRAL	.	3,864	3,864
HMO REFERRAL	.	1,056	1,056
TRANSFER FROM HOSPITAL	.	7,633	7,633
TRANSFER FROM SNF	.	1,356	1,356
TRANSFER FROM OTHER	.	2,828	2,828
EMERGENCY ROOM	.	102,085	102,085
COURT/LAW ENFORCEMENT	.	501	501
OTHER	35,195	2,784	37,979
NOT AVAILABLE	.	91,372	91,372
FIRST-LISTED DIAGNOSIS CHAPTER			
CHAPTER 01	.	7,539	7,539
CHAPTER 02	.	15,796	15,796
CHAPTER 03	.	14,467	14,467
CHAPTER 04	.	4,206	4,206
CHAPTER 05	.	19,814	19,814
CHAPTER 06	.	4,957	4,957
CHAPTER 07	.	54,645	54,645
CHAPTER 08	.	29,542	29,542
CHAPTER 09	.	28,319	28,319
CHAPTER 10	.	15,314	15,314
CHAPTER 11	.	4,581	4,581
CHAPTER 12	.	5,269	5,269
CHAPTER 13	.	15,245	15,245
CHAPTER 14	.	2,079	2,079
CHAPTER 15	.	1,770	1,770
CHAPTER 16	.	2,054	2,054
CHAPTER 17	.	22,856	22,856
V-CODES	35,195	43,606	78,801

WEIGHTED FREQUENCIES FOR SELECTED VARIABLES

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
SURVEY YEAR			
2002	3,789,310	33,726,611	37,515,921
UNITS			
YEARS	.	32,916,509	32,916,509
MONTHS	.	574,192	574,192
DAYS	3,789,310	235,910	4,025,220
AGE			
U15 YEARS	3,789,310	2,539,536	6,328,846
15-44 YEARS	.	10,736,431	10,736,431
45-64 YEARS	.	7,723,290	7,723,290
65 YEARS &UP	.	12,727,354	12,727,354
SEX			
MALE	1,940,256	13,388,628	15,328,884
FEMALE	1,849,054	20,337,983	22,187,037
RACE			
WHITE	2,059,388	20,805,709	22,865,097
BLACK/AFRICAN AMERICAN	421,097	3,994,884	4,415,981
AMERICAN INDIAN//ALASKAN NATIVE	27,318	172,538	199,856
ASIAN	78,360	446,743	525,103
NATIVE HAWAIIAN/OTH PACIFIC ISLANDER	9,105	91,343	100,448
OTHER	91,155	576,377	667,532
MULTIPLE RACE	1,045	9,498	10,543
NOT STATED	1,101,842	7,629,519	8,731,361
MARSTAT			
MARRIED	3,398	9,856,355	9,859,753
SINGLE	2,483,827	6,433,348	8,917,175
WIDOWED	.	3,233,194	3,233,194
DIVORCED	604	1,372,903	1,373,507
SEPARATED	614	198,052	198,666
NOT STATED	1,300,867	12,632,759	13,933,626
DISCHARGE STATUS			
ROUTINE	3,661,477	26,401,710	30,063,187
LEFT AGAINST MEDICAL ADVICE	1,442	292,236	293,678
SHORT-TERM TRANSFER	44,319	1,546,203	1,590,522
LONG-TERM TRANSFER	1,893	2,899,613	2,901,506
ALIVE, OTHER	58,597	1,502,023	1,560,620
DEAD	11,156	811,430	822,586
NOT STATED	10,426	273,396	283,822
LOSFLAG			
LESS THAN 1 DAY	34,085	690,228	724,313
ONE DAY OR MORE	3,755,225	33,036,383	36,791,608

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
REGION			
NORTHEAST	724,777	6,989,562	7,714,339
MIDWEST	764,279	7,503,133	8,267,412
SOUTH	1,354,445	12,994,445	14,348,890
WEST	945,809	6,239,471	7,185,280
BEDSIZE			
6-99	738,297	7,902,725	8,641,022
100-199	1,051,096	8,353,442	9,404,538
200-299	683,230	6,767,305	7,450,535
300-499	924,878	7,445,878	8,370,756
500&UP	391,809	3,257,261	3,649,070
OWNERSHIP			
PROPRIETARY	509,118	4,444,541	4,953,659
GOVERNMENT	475,985	4,152,633	4,628,618
NOT FOR PROFIT	2,804,207	25,129,437	27,933,644
PRINCIPAL EXPTD SOURCE OF PAYMENT			
WORKER'S COMPENSATION	1,704	194,207	195,911
MEDICARE	.	13,191,148	13,191,148
MEDICAID	1,299,052	4,933,237	6,232,289
OTHER GOVERNMENT PAY	47,455	485,745	533,200
BLUE CROSS/BLUE SHIELD	462,130	2,968,569	3,430,699
HMO/PPO	1,096,625	5,795,338	6,891,963
OTHER PRIVATE/COMMERCIAL INS	529,702	3,391,002	3,920,704
SELF PAY	172,999	1,429,303	1,602,302
NO CHARGE	4,231	103,617	107,848
OTHER	101,384	649,405	750,789
SOURCE NOT STATED	74,028	585,040	659,068
DISCHARGE MONTH			
JANUARY	305,139	2,982,298	3,287,437
FEBRUARY	285,175	2,812,259	3,097,434
MARCH	326,184	3,032,316	3,358,500
APRIL	289,042	2,840,879	3,129,921
MAY	318,073	2,905,091	3,223,164
JUNE	321,473	2,767,121	3,088,594
JULY	341,597	2,813,456	3,155,053
AUGUST	359,029	2,805,376	3,164,405
SEPTEMBER	332,185	2,657,295	2,989,480
OCTOBER	313,613	2,771,356	3,084,969
NOVEMBER	295,482	2,658,127	2,953,609
DECEMBER	302,318	2,681,037	2,983,355
TYPE OF ADMISSION			
EMERGENCY	.	11,493,811	11,493,811
URGENT	.	7,778,449	7,778,449
ELECTIVE	.	7,009,607	7,009,607
NEWBORN	3,789,310	.	3,789,310
NOT STATED	.	7,444,744	7,444,744

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
SOURCE OF ADMISSION			
PHYSICIAN REFERRAL	.	11,883,115	11,883,115
CLINICAL REFERRAL	.	569,612	569,612
HMO REFERRAL	.	142,762	142,762
TRANSFER FROM HOSPITAL	.	902,422	902,422
TRANSFER FROM SNF	.	256,057	256,057
TRANSFER FROM OTHER	.	298,257	298,257
EMERGENCY ROOM	.	12,198,048	12,198,048
COURT/LAW ENFORCEMENT	.	121,726	121,726
OTHER	3,789,310	559,243	4,348,553
NOT AVAILABLE	.	6,795,369	6,795,369
FIRST-LISTED DIAGNOSIS CHAPTER			
CHAPTER 01	.	876,938	876,938
CHAPTER 02	.	1,682,423	1,682,423
CHAPTER 03	.	1,618,700	1,618,700
CHAPTER 04	.	446,169	446,169
CHAPTER 05	.	2,463,616	2,463,616
CHAPTER 06	.	518,045	518,045
CHAPTER 07	.	6,373,257	6,373,257
CHAPTER 08	.	3,541,685	3,541,685
CHAPTER 09	.	3,320,338	3,320,338
CHAPTER 10	.	1,817,129	1,817,129
CHAPTER 11	.	527,604	527,604
CHAPTER 12	.	601,130	601,130
CHAPTER 13	.	1,736,255	1,736,255
CHAPTER 14	.	177,500	177,500
CHAPTER 15	.	165,712	165,712
CHAPTER 16	.	283,031	283,031
CHAPTER 17	.	2,697,138	2,697,138
V-CODES	3,789,310	4,879,941	8,669,251

WEIGHTED FREQUENCIES FOR ALL-LISTED DIAGNOSES BY ICD-9-CM CHAPTERS

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
ALL DIAGNOSES	7,754,376	157,933,984	165,688,360
CHAPTER 01	21,491	3,894,685	3,916,176
CHAPTER 02	11,530	4,362,122	4,373,652
CHAPTER 03	25,149	17,361,905	17,387,054
CHAPTER 04	8,750	4,603,218	4,611,968
CHAPTER 05	3,235	11,398,336	11,401,571
CHAPTER 06	12,241	3,761,863	3,774,104
CHAPTER 07	17,690	32,355,663	32,373,353
CHAPTER 08	10,933	11,181,193	11,192,126
CHAPTER 09	22,462	10,231,799	10,254,261
CHAPTER 10	38,978	8,123,241	8,162,219
CHAPTER 11	.	9,450,164	9,450,164
CHAPTER 12	20,809	2,116,441	2,137,250
CHAPTER 13	10,622	6,230,402	6,241,024
CHAPTER 14	229,059	713,559	942,618
CHAPTER 15	2,328,463	471,735	2,800,198
CHAPTER 16	70,440	8,221,028	8,291,468
CHAPTER 17	12,019	6,311,191	6,323,210
ECODES	11,568	4,404,975	4,416,543
VCODES	4,898,937	12,740,464	17,639,401

UNWEIGHTED FREQUENCIES FOR ALL-LISTED DIAGNOSES BY ICD-9-CM CHAPTERS

ALL DIAGNOSES	75,059	1,395,333	1,470,392
CHAPTER 01	367	33,822	34,189
CHAPTER 02	79	41,527	41,606
CHAPTER 03	202	152,100	152,302
CHAPTER 04	68	41,291	41,359
CHAPTER 05	23	99,102	99,125
CHAPTER 06	95	33,351	33,446
CHAPTER 07	187	282,385	282,572
CHAPTER 08	94	97,367	97,461
CHAPTER 09	234	88,866	89,100
CHAPTER 10	343	71,858	72,201
CHAPTER 11	.	88,947	88,947
CHAPTER 12	212	19,661	19,873
CHAPTER 13	87	52,952	53,039
CHAPTER 14	2,462	7,669	10,131
CHAPTER 15	22,526	5,196	27,722
CHAPTER 16	596	78,274	78,870
CHAPTER 17	87	53,342	53,429
ECODES	63	30,070	30,133
VCODES	47,334	117,553	164,887

WEIGHTED FREQUENCIES FOR ALL-LISTED PROCEDURES BY ICD-9-CM CHAPTERS

	NEWBORN INFANTS	NON-NEWBORNS	TOTAL SAMPLE
ALL PROCEDURES	2,748,947	42,533,221	45,282,168
CHAPTER 01	28,434	1,101,041	1,129,475
CHAPTER 02	.	102,079	102,079
CHAPTER 03	972	86,047	87,019
CHAPTER 04	1,492	45,950	47,442
CHAPTER 05	3,096	269,323	272,419
CHAPTER 06	10,827	1,021,548	1,032,375
CHAPTER 07	129,371	6,812,702	6,942,073
CHAPTER 08	454	353,650	354,104
CHAPTER 09	10,182	5,596,820	5,607,002
CHAPTER 10	1,833	954,545	956,378
CHAPTER 11	1,170,267	261,529	1,431,796
CHAPTER 12	14	2,160,783	2,160,797
CHAPTER 13	.	6,645,734	6,645,734
CHAPTER 14	901	3,441,714	3,442,615
CHAPTER 15	8,389	1,347,612	1,356,001
CHAPTER 16	1,382,715	12,332,144	13,714,859

UNWEIGHTED FREQUENCIES FOR ALL-LISTED PROCEDURES BY ICD-9-CM CHAPTERS

ALL PROCEDURES	25,598	405,134	430,732
CHAPTER 01	245	11,087	11,332
CHAPTER 02	.	906	906
CHAPTER 03	14	885	899
CHAPTER 04	9	474	483
CHAPTER 05	37	2,650	2,687
CHAPTER 06	118	10,007	10,125
CHAPTER 07	1,155	62,986	64,141
CHAPTER 08	3	3,460	3,463
CHAPTER 09	101	49,806	49,907
CHAPTER 10	9	9,176	9,185
CHAPTER 11	11,705	2,501	14,206
CHAPTER 12	1	18,823	18,824
CHAPTER 13	.	64,455	64,455
CHAPTER 14	6	30,936	30,942
CHAPTER 15	90	12,223	12,313
CHAPTER 16	12,105	124,759	136,864

APPENDIX E

NHDS Medical Abstract Form

Form HDS-1

OMB No. 0920-0212: Approval Expires 08/31/2005

Notice – All information which would permit identification of an individual or an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to other persons or used for any other purpose. Public reporting burden of this collection of information is estimated to average 4 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer; 1600 Clifton Road, MS D-24, Atlanta, GA 30333, ATTN: PRA (0920-0212)

FORM **HDS-1**
(3-27-2003)

U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. CENSUS BUREAU
ACTING AS COLLECTING AGENT FOR
DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
NATIONAL CENTER FOR HEALTH STATISTICS

MEDICAL ABSTRACT – NATIONAL HOSPITAL DISCHARGE SURVEY

A. PATIENT IDENTIFICATION

1. Hospital number . . . . . .

2. HDS number . . . . . .

3. *(Item deleted)*

4. Date of admission . . . . . Month ___ – Day ___ – Year ____

5. Date of discharge . . . . . Month ___ – Day ___ – Year ____

6. Residence ZIP Code . . . .

B. PATIENT CHARACTERISTICS

7. Date of birth Month ___ – Day ___ – Year ____

8. Age – Complete only if date of birth not given Units ___
1 ☐ Years
2 ☐ Months
3 ☐ Days

9. Sex – *Mark (X) one*
1 ☐ Male 2 ☐ Female 3 ☐ Not stated

10. Ethnicity – *Mark (X) one*
1 ☐ Hispanic or Latino 2 ☐ Not Hispanic or Latino 3 ☐ Not stated

11. Race – *Mark all that apply*
1 ☐ White
2 ☐ Black or African American
3 ☐ American Indian or Alaska Native
4 ☐ Asian
5 ☐ Native Hawaiian or Other Pacific Islander
6 ☐ Other – *Specify*
7 ☐ Not stated

12. Marital status – *Mark (X) one*
1 ☐ Married 3 ☐ Widowed 5 ☐ Separated
2 ☐ Single 4 ☐ Divorced 6 ☐ Not stated

C. ADMINISTRATIVE INFORMATION

13. Type of Admission – *Mark (X) one*
1 ☐ Emergency 3 ☐ Elective 5 ☐ Items not available/ unknown
2 ☐ Urgent 4 ☐ Newborn

14. Source of Admission – *Mark (X) one*
1 ☐ Physician referral
2 ☐ Clinical referral
3 ☐ HMO referral
4 ☐ Transfer from a hospital
5 ☐ Transfer from SNF
6 ☐ Transfer from other health facility
7 ☐ Emergency room
8 ☐ Court/Law enforcement
9 ☐ Other – *Specify*
10 ☐ Item not available

15. Status/Disposition of patient – *Mark (X) appropriate box(es)*

Status
1 ☐ Alive → Disposition:
a. ☐ Routine discharge/discharged home
b. ☐ Left against medical advice
c. ☐ Discharged, transferred to another short-term hospital
d. ☐ Discharged, transferred to long-term care institution
e. ☐ Other disposition/not stated
2 ☐ Died
3 ☐ Status not stated

16. Expected source(s) of payment

	Principal *Mark one only*	Other additional sources *Mark all that apply*
1. Worker's compensation	☐	☐
2. Medicare	☐	☐
3. Medicaid	☐	☐
4. Other government payments	☐	☐
5. Blue Cross/Blue Shield	☐	☐
6. HMO/PPO	☐	☐
7. Other private or commercial insurance	☐	☐
8. Self pay	☐	☐
9. No charge	☐	☐
10. Other –*Specify*	☐	☐
☐ No source of payment indicated		

(Over)

D. MEDICAL INFORMATION

17. Final Diagnoses (including E-code diagnoses) (Enter ICD-9-CM codes as well as narrative if available)

Principal: _____

Other/additional: _____

18. Surgical and Diagnostic Procedures (Enter ICD-9-CM codes as well as narrative if available)

	Date of procedure(s)		
	Month	Day	Year
Principal:			
Other/additional:			

☐ NONE

Completed by	Date