NATIONAL HOSPITAL

DISCHARGE SURVEY

Public Use Data Tape Documentation

1998

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Abstract

This material provides documentation for users of the 1998 NHDS Public Use Data Tape. 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 followed, including data collection and medical coding procedures; population estimates; measurement errors and sampling errors.

Section II provides technical details of the tape.

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 the user to calculate rates; and Appendix D provides unweighted and weighted frequencies for selected variables.

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I. DESCRIPTION OF THE NATIONAL HOSPITAL DISCHARGE SURVEY

Introduction. This document and its appendices contain information for users of the 1998 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 inpatient hospital utilization in the United States. For a 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 Government Printing Office.

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 Tape (2), met the above criteria, and began accepting patients by August 1987. The hospital sample was updated in 1991, 1994, and 1997, to allow for hospitals that opened later or changed their eligibility status since the previous sample update. For 1998 the sample consisted of 513 hospitals. Of the 513 hospitals, 18 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 495 inscope (eligible) hospitals, 478 hospitals responded to the survey.

Sample design and data collection. The 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 sample hospital, a systematic random sample of discharges was selected. A report on the design and development of the original NHDS has been published (1).

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. As did the original design, the redesigned NHDS sample included with certainty the largest hospitals. The remaining sample of hospitals was based on a stratified, three-stage design. The first stage consisted of selecting 112 primary sampling units (PSU's) that comprised a probability subsample of PSU's used in the 1985-94 National Health Interview Survey. The second stage consisted of selecting non-certainty hospitals from the sample PSU's. At the third stage a sample of discharges was selected by a systematic random sampling technique.

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 59 percent of the responding hospitals.   The second was an automated method, used for approximately 41 percent of the respondent hospitals, that involved the purchase of computerized data tapes 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 1998, about 33 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 tapes containing machine-readable medical record data from which records were systematically sampled by NCHS.

The Medical Abstract Form (Figure 1) 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, discharge status, and medical record number; 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. (The medical record number, date of birth, and patient zip code are confidential information and are not available to the public.)

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 tapes is the *International Classification of Diseases, 9th Revision, Clinical Modification,* or ICD-9-CM (3).

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.

Figure 1. Medical abstract for the 1998 National Hospital Discharge Survey (front)

Figure 1 (continued). Medical abstract for the 1998 National Hospital Discharge Survey (back)

Following conversion of the data on the medical abstract to computer tape and combining it with the automated data tapes, 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**.
< 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 annual ICD-9-CM addenda. The addenda 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. A list of the changes for 1986 through 1997 are listed in Appendix B. All coding of the 1998 data is consistent with the ICD-9-CM and the addendum effective October 1, 1997. Information provided by automated systems for the last three months of 1998 which was coded using the October 1998 addendum was converted back to the previous code assignment. This was done in order to prevent NHDS data users from mistaking partial year estimates for annual estimates.

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 (4). 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. Appendix C shows estimates of the civilian population of the United Stated as of July 1, 1998, which have been provided by the U.S. Bureau of the Census. Figures are consistent with national population estimates in US-98-SIS-7 (U.S. Population Estimates by Age, Sex, Race and Hispanic Origin: 1998) and have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix. NOTE THAT PRIOR TO THE 1997 DATA YEAR, CENSUS ESTIMATES OF THE CIVILIAN POPULATION PROVIDED WITH THE NHDS PUBLIC USE DATA TAPE DOCUMEN-TATION WERE NOT ADJUSTED FOR THE UNDERCOUNT.

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 earlier. 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. Data on race were missing for 22.3 percent of the discharges, and no attempt was made to impute for these missing values.

During 1998, 18.5 percent of the records lacked the date of admission, but included a length of stay. Because the new edit program does not require exact admission or discharge dates if length of stay is provided on the record, 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 Shah, Barnwell, and Bieler (5).

Relative Standard Errors for Aggregate Estimates

Parameters for calculating 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 was then used to produce best-fit curves, based on the empirically determined relationship between the size of an estimate X and its relative variance. The relative standard error of an estimate X [RSE(X)] is the square root of the relative variance and 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 1998 the estimated number of discharges from short-stay hospitals for females with a first-listed diagnosis of atherosclerotic heart disease (ICD-9-CM code 414.0) was 426,000. Using the applicable constants from Table 1 for estimates by sex produces:

$$RSE(426,000) = SQRT(.00139 + (319.01469/426,000))$$

$$RSE(426,000) = .046$$

When multiplied by 100, the relative standard error for the estimate of interest becomes 4.6 percent. The standard error of the estimate is obtained by multiplying the relative standard error by the estimate itself:

$$SE(426,000) = 426,000 * .046 = 19,596$$

The standard error can be used to generate confidence intervals for statistical testing. In this example, the 95% confidence interval for the estimate of female inpatients with a first-listed diagnosis of atherosclerotic heart disease is:

$$(426,000 - 2*19,596) <-> (426,000 + 2*19,596)$$

$$387,000 <-> 465,000$$

Relative Standard Error for Estimates of Percents

Approximate relative standard errors for estimates of percents may be calculated from Table 1 also. The relative standard error for a percent, 100 p (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 1998 the estimated number of discharges from short-stay hospitals which were female was 19,358,000. This is 60.8 percent of the estimated 31,827,000 discharges for that year. Using the applicable constants from Table 1 for estimates by sex produces:

$$RSE(.608) = SQRT(319.01469 * (1 - .608)/(.608 * 31,827,000))$$

$$RSE(.608) = .002542$$

When multiplied by 100, the relative standard error for the estimate of interest becomes .2542 percent. From this the standard error is obtained by multiplying the relative standard error by the estimate itself:

$$SE(.608) = .608* 0.002542 = .0015$$

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 percentage of female inpatients is:

$$(.608 - 2*.0015) <-> (.608 + 2*.0015)$$

$$.605 <-> .611$$

or, equivalently, **60.5% <-> 61.1%**

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 1998, the estimated number of days of care for inpatients with a first-listed diagnosis of asthma (ICD-9-CM code 493) was 1,403,000. The estimated number of discharges for inpatients with a first-listed diagnosis of asthma was 423,000. The ALOS for inpatients with a first-listed diagnosis of asthma was 1,403,000/423,000 = 3.3.

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(1,403,000) = .0572
RSE(423,000) = .0476

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

$$RSE(3.3) = SQRT((.0572)^2 + (.0476)^2)$$

$$RSE(3.3) = .0744$$

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

$$SE(3.3) = .0744 * 3.3 = .246$$

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 asthma is:

$$(3.3 - 2*.246) \ <-> \ (3.3 + 2*.246)$$

$$2.8 \ <-> \ 3.8$$

Table 1. Parameter values for relative standard errors for National Hospital Discharge Survey aggregate statistics by statistic type: United States, 1998

Characteristic	FIRST-LISTED DIAGNOSES		DAYS OF CARE		ALL-LISTED DIAGNOSES		ALL-LISTED PROCEDURES	
	a	b	a	b	a	b	a	b
TOTAL	0.001474	333.82995	0.002478	1115.55822	0.001725	356.97067	0.005122	371.09520
Sex								
Male	0.001841	277.48053	0.003443	979.48669	0.004484	254.16581	0.003476	316.20322
Female	0.001390	319.01469	0.002535	1104.70421	0.001329	356.12165	0.002553	329.53303
AGE GROUP								
Under 15 years	0.013772	221.95602	0.024549	358.17366	0.017317	245.19179	0.019256	242.69919
15-44 years	0.001351	321.82512	0.002783	1063.55252	0.001894	372.35478	0.003436	285.51107
45-64 years	0.001449	304.59927	0.002834	1071.66793	0.002102	291.98766	0.002287	282.87911
65 years and over	0.002439	296.59270	0.002895	1629.26002	0.001805	311.37733	0.003308	298.56299
REGION								
Northeast	0.004204	190.86167	0.008326	555.18142	0.006222	218.30370	0.008680	235.99560
Midwest	0.007136	201.88824	0.008472	854.88223	0.007225	159.26343	0.010562	113.58508
South	0.004216	272.46301	0.006098	989.44305	0.004317	367.77093	0.004505	271.95957
West	0.004130	351.09498	0.008749	955.25003	0.003778	438.25515	0.005302	379.08359
RACE								
White	0.002939	376.66786	0.004696	1256.07562	0.003457	366.51155	0.004684	374.42144
Black	0.016054	160.89472	0.009000	365.00506	0.011496	169.73050	0.005788	221.77234
All other	0.022023	139.57327	0.030362	271.00910	0.019129	178.19012	0.020828	169.78444
Race not stated	0.019137	169.02529	0.022533	491.56294	0.022849	237.89292	0.021049	160.23083
ESOP								
Worker's comp	0.005172	277.52027	0.019299	443.07326	0.010229	273.92506	0.009042	247.24114
Medicare	0.002548	439.59309	0.003185	1686.71245	0.002019	353.06875	0.003497	322.35928
Medicaid	0.004713	280.06192	0.008879	726.61689	0.009977	349.81594	0.006014	278.89537
Other govt payments	0.039746	183.40431	0.040988	894.99974	0.053799	123.13141	0.068235	113.65975
Blue Cross/Blue Shield	0.014019	136.57546	0.021243	337.99389	0.014052	150.21729	0.018803	94.89435
HMO/PPO	0.007142	302.58139	0.012461	864.93671	0.007564	299.41635	0.010683	232.00650
Other private	0.002866	331.48543	0.004666	1018.53747	0.003579	342.28753	0.005483	308.03612
Self pay	0.003720	262.81896	0.008077	906.25949	0.005085	271.39764	0.008304	220.90794
No charge	0.060267	442.17820	0.074890	1674.03255	0.092281	-102.70351	0.076819	293.60323
Other	0.028302	125.63849	0.036901	254.79453	0.023925	165.19730	0.038532	76.90586
Not stated	0.020734	334.65272	0.027428	1565.01305	0.021758	375.92613	0.032155	259.32254

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 inscope. 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 1998 NHDS, 88.7 percent of the 478 responding hospitals provided data for all twelve months, and 96.2 percent provided at least nine months of data.

How to Use the Data Tape. The NHDS records are weighted to allow inflation to national or regional estimates. The weight applied to each record is found in tape 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 (tape 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 unweighted and weighted frequencies for selected variables on the data tape. These may be used as a cross-check when processing the data on the user's system.

Diagnosis-Related Groups (DRGs). Many users of the NHDS data tapes have expressed an interest in converting the data to DRGs. This has been done using DRG Grouper Programs obtained from the Health Care Financing Administration. 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 data on the tape should be directed to:

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Centers for Disease Control and Prevention
National Center for Health Statistics
Division of Health Care Statistics
Hospital Care Statistics Branch
6525 Belcrest Road, Room 956
Hyattsville, Maryland 20782
Phone: 301.458.4321
Fax: 301.458.4032
Email: jpopovic@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 our 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

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II. TECHNICAL DESCRIPTION OF TAPE

Data Set Name--BG10.NHDS98.PU
Number of REELS or CARTRIDGES--1
Number of Recording Tracks, REEL---9
Number of Recording Tracks, CARTRIDGE-------------------------------------18
Density for REEL (bpi)---6,250
Density for CARTRIDGE (bpi)--38,000
Language--EBCDIC
Parity--Odd
Record Length---85
Block Size---16,200
Number of Records--307,475

III. RECORD LAYOUT: Location and Coding of Data Elements

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

Please note that the location and coding of some variables in 1998 differs from previous years. Please pay particular attention to the following:

- Discharge month replaces admission month in position 10-11.
- The principal and expected source of payment variables are now two-digit as opposed to one-digit variables. They also have different values and different positions than in previous years.
- A century variable (the first two digits of the survey year) now appears in position 26-27.
- DRG is located in position 83-85.

Item Number	Tape Location	Number of Positions	Item description	Code description
1	1-2	2	Survey Year	98
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: 00-31 *Ages 100 and over were recoded to 99
5	7	1	Sex	1=Male 2=Female
6	8	1	Race	1=White 2=Black 3=American Indian/Eskimo 4=Asian/Pacific Islander 5=Other 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 99=Missing

Item Number	Tape Location	Number of Positions	Item description	Code description
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)
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 owner-ship	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**	19
17	28-32	5	Diagnosis code #1	*

Item Number	Tape Location	Number of Positions	Item description	Code description
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	*
28	79-80	2	**Principal expected source of payment**	01=Worker's comp 02=Medicare 03=Medicaid 04=Other government 05=Blue Cross/Blue Shield 06=HMO/PPO 07=Other private 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
30	83-85	3	**Diagnosis-Related Groups (DRG)**	Grouper version 15.0

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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 (2).

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,* which has been used for coding NHDS data since 1979, undergoes annual updating. Assignment of new diagnostic and procedure codes, fourth and fifth digit expansion of codes, as well as code deletions, 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 Health Care Financing Administration. Addenda to the ICD-9-CM become effective on October 1 of the calendar year and have been released for 1986 through 1998.

As described earlier in this document, the 1998 NHDS involved two data collection modes: manual and abstract service. All data collected manually were coded using the third edition of the ICD-9-CM, which includes the addenda for 1986 through 1997. Data collected via abstract service were coded using two different ICD-9-CM revisions. For the first 9 months of 1998, the ICD-9-CM including the addendum of October 1, 1986-97 was used; for the last 3 months the October 1998 addendum was used. Therefore, data provided by automated systems for the last three months of 1998 was converted back to the code assignment under the October 1997 addendum. This was done in order to prevent NHDS data users from mistaking partial year estimates for annual estimates.

In order to assist users in data retrieval, a conversion table is provided that 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.

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
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
041.00-041.09	1992	041.0
041.04 (code title restated)	1997	041.04
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
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
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
250.13	1993	250.11
250.22	1993	250.20
250.23	1993	250.21
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
275.40-275.42	1997	275.4
275.49	1997	275.4
278.00-278.01	1995	278.0
283.10-283.11,283.19	1993	283.1
291.81	1996	291.8
291.89	1996	291.8
293.84	1996	293.89
300.82	1996	300.81
305.1	1994	305.10, 305.11, 305.12, 305.13 (Codes deleted)

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
337.20-337.22,337.29	1993	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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
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
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
438.81	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
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
482.30-482.39	1992	482.3

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
482.81-482.89	1992	482.8
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
512.1	1994	997.3
518.6	1997	518.89
518.81	1987	799.1
518.82-518.89	1987	518.8
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
530.10-530.11, 530.19	1993	530.1
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
535.60-535.61	1991	535.6

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
536.3	1994	536.8
537.82	1990	537.89
537.83	1991	537.82
556.0-556.6	1994	556
556.8-556.9	1994	556
562.02	1991	562.00
562.03	1991	562.01
562.12	1991	562.10
562.13	1991	562.11
569.60-569.61	1995	569.6
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
596.51-596.53	1992	596.5
596.54	1992	344.61
596.55-596.59	1992	596.5
599.81-599.89	1992	599.8
645.0	1991	645
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
654.90-651.94	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
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	No previous code assignment

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
692.72-692.74	1992	692.79
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
709.00-709.01,709.09	1994	709.0
710.5	1992	288.3,729.1
728.86	1995	729.4
733.10-733.16, 733.19	1993	733.1
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
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
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
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
781.8	1994	781.9
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
790.91	1993	790.9
790.92	1993	286.9
790.93, 790.99	1993	790.9
790.94	1997	790.99
795.71	1994	795.8 (Code deleted)
795.79	1994	795.7
795.8	1986	795.7
796.5	1997	796.9
864.05	1992	864.09
864.15	1992	864.19
909.5	1994	909.9
922.31-922.33	1996	922.3

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
925.1-925.2	1993	925
959.0 (code title restated)	1997	959.0
959.01	1997	854.00
959.09	1997	959.0
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
995.80	1996	995.81
995.81 (Code title restated)	1996	995.81
995.82-995.85	1996	995.81
996.04	1994	996.09
996.51-996.59	1987	996.5
996.60-996.69	1989	996.6
996.70-996.79	1989	996.7
996.80-996.84	1987	996.8
996.85	1990	996.8
996.86	1987	996.8
996.89	1987	996.8
997.00-997.01	1995	997.0
997.02	1995	997.9 & 430-434, 436
997.09	1995	997.0
997.91	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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
998.59	1996	998.5
998.81-998.82, 998.89	1994	998.8
998.83	1996	998.89
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	No previous code assignments
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
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

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
V16.40-V16.43	1997	V16.4
V16.49	1997	V16.4
V23.7	1989	V23.8
V25.43	1992	V25.49
V25.5	1992	V25.8
V28.6	1997	V28.8
V29.0-V29.1, V29.8	1992	V71.8
V29.2	1994	V29.8
(Note: Codes V29.3-V29.7 have not been assigned yet)		
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-V39.0l	1989	V39.0

DIAGNOSIS CODES

	Effective	
Current code(s) assignment	October 1	Previous code(s) assignment
V42.81-V82.83	1997	V42.8
V42.89	1997	V42.8
V43.60-V43.66, V43.69	1994	V43.6
V43.81-V43.82	1995	V43.8
V43.89	1995	V43.8
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
V45.82	1994	V45.89
V45.83	1995	V45.89
V49.60-V49.67	1994	V49.5
V49.70-V49.77	1994	V49.5
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
V56.1	1995	V58.89
V57.21-V57.22	1994	V57.2

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
V58.41, V58.49	1994	V58.4
V58.61	1995	V67.51
V58.69	1995	V67.51
V58.81, V58.89	1994	V58.8
V58.82	1995	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	No previous code assignment
V65.40-V65.45, V65.49	1994	V65.4
V66.7	1996	No previous code assignment
V69.0-V69.3	1994	No previous code assignments
V69.8-V69.9	1994	No previous code assignments
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
V76.19	1997	V76.1
E854.8	1995	E858.8

DIAGNOSIS CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
E869.4	1994	E869.8
E880.1	1995	E884.9
E884.3-E884.4	1995	E884.2
E884.5-E884.6	1995	E884.9
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
E920.5	1995	E920.4
E922.4	1997	E917.9
E924.2	1995	E924.0
E955.6	1997	E955.9
E967.2	1996	E967.0
E967.3	1996	No previous code assignment
E967.4-E967.8	1996	E967.1
E968.5	1995	E968.8
E968.6	1997	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

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
36.09	1986	36.0
36.09	1991	36.00 (Code deleted)
36.17	1996	36.19
37.26-37.27	1988	37.29
37.34	1988	37.33
37.35	1997	37.33
37.65	1995	37.62
37.66	1995	37.62
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)

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
39.90	1996	39.50
41.00-41.03	1988	41.0
41.04	1994	99.79
41.05	1997	No previous code assignment
41.06	1997	No previous code assignment
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

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
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
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

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
59.03	1996	59.02
59.12	1996	59.11
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
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

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
66.02	1992	66.73
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)
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 (Invalid code)	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

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
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

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment
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
86.93	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
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
93.90	1988	93.92
94.61-94.69	1989	94.25
96.6	1986	96.35
96.70	1991	93.92 (Code deleted)
96.71	1991	93.92 (Code deleted)

PROCEDURE CODES

Current code(s) assignment	Effective October 1	Previous code(s) assignment	
96.72	1991	93.92	(Code deleted)
97.05	1989	51.97	
98.51-98.52	1989	59.96	(Code deleted)
98.59	1989	59.96	(Code deleted)
99.00	1995	99.02	
99.15	1986	99.29	
99.28	1994	99.25	
99.71-99.74, 99.79*	1988	99.07	
99.85	1987	93.35	
99.86	1987	93.39	
99.88	1988	99.83	

PROCEDURE CODES

	Effective	
Current code(s) assignment	October 1	Previous code(s) assignment

*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

Adjusted Civilian Population* by Sex, Age, Geographic Region and Race, United States, July 1, 1998
[Population estimates consistent with Series P-25, Current Population Reports, U.S. Bureau of the Census]

	Both sexes	Male	Female		Both sexes	Male	Female
				Population in thousands			
All ages	273,125	133,393	139,732	**15 to 44 years (cont.)**			
				Northeast	22,993	11,422	11,571
Northeast	52,103	25,210	26,893	Midwest	28,081	14,030	14,051
Midwest	63,213	30,842	32,371	South	42,920	21,171	21,749
South	96,580	46,793	49,787	West	28,001	14,302	13,698
West	61,229	30,549	30,680				
				White	98,394	49,570	48,824
White	224,394	110,122	114,272	Black	17,117	8,195	8,922
Black	35,629	16,906	18,724	All other	6,483	3,159	3,324
All other	13,102	6,365	6,736				
				45 to 64 years	57,080	27,669	29,411
Under 15 years	59,950	30,673	29,278	45 to 54 years	34,595	16,928	17,667
Under 1 year	3,923	2,004	1,919	55 to 64 years	22,485	10,742	11,744
1 to 4 years	15,719	8,037	7,682				
5 to 14 years	40,309	20,632	19,677	Northeast	11,182	5,375	5,808
				Midwest	13,296	6,466	6,829
Northeast	10,730	5,491	5,238	South	20,383	9,797	10,586
Midwest	13,728	7,028	6,700	West	12,219	6,031	6,188
South	21,255	10,863	10,391				
West	14,238	7,290	6,948	White	48,628	23,830	24,798
				Black	6,052	2,711	3,341
White	47,019	24,100	22,918	All other	2,401	1,128	1,272
Black	9,629	4,885	4,744				
All other	3,303	1,687	1,615	**65 years and over**	34,100	14,127	19,974
				65 to 74 years	18,221	8,199	10,022
15 to 44 years	121,994	60,925	61,069	75 to 84 years	11,853	4,743	7,110
15 to 24 years	37,897	19,257	18,641	85 years and over	4,027	1,185	2,842
25 to 34 years	39,355	19,476	19,879				
35 to 44 years	44,741	22,192	22,550	Northeast	7,198	2,922	4,276
				Midwest	8,109	3,318	4,791
				South	12,023	4,962	7,061
				West	6,771	2,925	3,846
				White	30,354	12,622	17,732
				Black	2,831	1,114	1,717
				All other	916	391	525

*The NHDS used the civilian noninstitutional 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 purchased NHDS tapes for years before 1981 and calculated rates using the civilian noninstitutionalized population provided in the documentation, these rates will have to be adjusted to be comparable to 1998 rates using the civilian resident population.

Adjusted Civilian Population of the United States, July 1, 1998. Estimates by Age, Sex, and Region.
Source: U.S. Bureau of the Census, Population Division Release US-98-SIS-7.

Age	United States Total	Male	Female	Northeast Total	Male	Female	Midwest Total	Male	Female	South Total	Males	Females	West Total	Males	Females
						Adjusted Civilian Population in Thousands									
All	273,125	133,393	139,732	52,103	25,210	26,893	63,213	30,842	32,371	96,580	46,793	49,787	61,229	30,549	30,680
0 to 4	19,642	10,040	9,601	3,440	1,760	1,681	4,384	2,241	2,143	7,033	3,593	3,440	4,784	2,446	2,338
5 to 9	20,528	10,503	10,025	3,727	1,910	1,817	4,640	2,376	2,264	7,219	3,688	3,531	4,942	2,530	2,411
10 to 14	19,781	10,129	9,652	3,562	1,822	1,740	4,704	2,411	2,294	7,002	3,582	3,420	4,512	2,314	2,198
15 to 19	19,952	10,228	9,724	3,455	1,770	1,685	4,803	2,459	2,344	7,127	3,629	3,498	4,567	2,370	2,197
20 to 24	17,946	9,029	8,917	3,132	1,584	1,548	4,136	2,078	2,059	6,435	3,162	3,273	4,243	2,206	2,037
25 to 29	18,985	9,381	9,604	3,580	1,777	1,804	4,237	2,083	2,153	6,733	3,259	3,473	4,436	2,262	2,174
30 to 34	20,370	10,095	10,275	4,067	1,995	2,072	4,553	2,254	2,299	7,060	3,464	3,596	4,690	2,382	2,308
35 to 39	22,727	11,286	11,441	4,482	2,208	2,274	5,221	2,605	2,616	7,888	3,875	4,013	5,136	2,598	2,538
40 to 44	22,015	10,906	11,109	4,277	2,089	2,188	5,132	2,552	2,580	7,678	3,781	3,897	4,928	2,484	2,444
45 to 49	18,972	9,317	9,654	3,688	1,780	1,908	4,428	2,179	2,249	6,644	3,253	3,391	4,212	2,106	2,106
50 to 54	15,623	7,610	8,013	3,090	1,494	1,596	3,589	1,749	1,840	5,558	2,686	2,872	3,386	1,681	1,705
55 to 59	12,315	5,925	6,390	2,431	1,166	1,265	2,884	1,392	1,493	4,433	2,109	2,324	2,566	1,258	1,308
60 to 64	10,171	4,817	5,354	1,973	934	1,038	2,394	1,147	1,248	3,749	1,750	1,999	2,055	985	1,069
65 to 69	9,497	4,363	5,134	1,934	879	1,055	2,191	1,004	1,187	3,469	1,583	1,886	1,904	897	1,007
70 to 74	8,723	3,836	4,887	1,831	795	1,036	2,043	903	1,139	3,112	1,358	1,753	1,738	779	958
75 to 79	7,158	2,985	4,173	1,523	623	900	1,691	696	995	2,497	1,034	1,463	1,446	632	814
80 to 84	4,695	1,758	2,937	1,025	375	650	1,156	423	733	1,595	592	1,003	919	368	550
85+	4,027	1,185	2,842	885	250	634	1,028	291	737	1,351	395	955	764	249	516
0 to 14	59,950	30,673	29,278	10,730	5,491	5,238	13,728	7,028	6,700	21,255	10,863	10,391	14,238	7,290	6,948
15 to 44	121,994	60,925	61,069	22,993	11,422	11,571	28,081	14,030	14,051	42,920	21,171	21,749	28,001	14,302	13,698
45 to 64	57,080	27,669	29,411	11,182	5,375	5,808	13,296	6,466	6,829	20,383	9,797	10,586	12,219	6,031	6,188
15+	213,175	102,721	110,454	41,373	19,719	21,655	49,485	23,814	25,671	75,325	35,930	39,395	46,991	23,258	23,733
45+	91,181	41,796	49,385	18,380	8,297	10,084	21,404	9,784	11,620	32,406	14,759	17,647	18,990	8,956	10,034
65+	34,100	14,127	19,974	7,198	2,922	4,276	8,109	3,318	4,791	12,023	4,962	7,061	6,771	2,925	3,846
75+	15,880	5,928	9,952	3,433	1,248	2,185	3,875	1,410	2,465	5,442	2,021	3,422	3,129	1,249	1,880

Adjusted Civilian Population of the United States, July 1, 1998.

Source: U.S. Bureau of the Census. Population Division Release US-98-SIS-7.

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female

Population in thousands

	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	273,125	133,393	139,732	224,394	110,122	114,272	35,629	16,906	18,724	13,102	6,365	6,736
0-4	19,642	10,040	9,601	15,455	7,918	7,537	3,060	1,551	1,509	1,127	571	555
0	3,923	2,004	1,919	3,081	1,577	1,503	611	310	301	231	117	114
1	3,885	1,984	1,901	3,063	1,568	1,495	599	303	295	223	113	110
2	3,883	1,986	1,897	3,070	1,574	1,496	588	298	289	225	114	111
3	3,926	2,008	1,919	3,093	1,586	1,507	610	309	302	223	113	110
4	4,025	2,059	1,966	3,148	1,614	1,534	652	330	321	225	115	110
5-9	20,528	10,503	10,025	16,049	8,223	7,826	3,380	1,715	1,665	1,099	565	534
5	4,074	2,087	1,987	3,181	1,632	1,549	668	339	329	225	116	109
6	4,142	2,116	2,026	3,247	1,660	1,586	669	340	329	226	116	110
7	4,180	2,137	2,044	3,274	1,676	1,598	681	344	336	225	116	109
8	3,999	2,046	1,953	3,136	1,607	1,529	656	333	323	208	107	101
9	4,133	2,117	2,015	3,211	1,647	1,564	706	359	347	215	111	104
10-14	19,781	10,129	9,652	15,515	7,959	7,556	3,190	1,619	1,570	1,076	550	526
10	4,058	2,080	1,979	3,168	1,626	1,542	674	343	332	216	112	105
11	3,947	2,020	1,927	3,100	1,589	1,511	642	325	317	206	106	100
12	3,938	2,015	1,923	3,089	1,583	1,505	634	322	312	216	110	106
13	3,962	2,027	1,935	3,119	1,599	1,520	624	317	307	219	111	108
14	3,875	1,987	1,887	3,040	1,563	1,477	615	313	302	219	112	108
15-19	19,952	10,228	9,724	15,728	8,091	7,637	3,167	1,598	1,569	1,057	539	518
15	3,992	2,050	1,942	3,130	1,611	1,519	637	324	313	225	114	111
16	4,018	2,069	1,949	3,166	1,635	1,531	639	326	312	213	108	105
17	4,031	2,080	1,951	3,178	1,645	1,533	637	325	312	216	110	106
18	3,939	2,015	1,924	3,115	1,600	1,516	626	313	313	198	102	96
19	3,970	2,013	1,957	3,138	1,600	1,539	627	308	319	205	105	100
20-24	17,946	9,029	8,917	14,259	7,225	7,034	2,696	1,299	1,397	991	505	485
20	3,828	1,937	1,891	3,044	1,549	1,495	586	286	300	197	101	96
21	3,712	1,875	1,837	2,944	1,495	1,449	569	278	292	199	102	96
22	3,460	1,742	1,718	2,754	1,396	1,358	512	247	266	194	99	95
23	3,470	1,740	1,730	2,762	1,396	1,366	513	245	268	195	99	96
24	3,476	1,735	1,740	2,756	1,389	1,367	515	243	271	206	103	103
25-29	18,985	9,381	9,604	15,120	7,551	7,569	2,716	1,270	1,447	1,149	561	588
25	3,517	1,747	1,770	2,775	1,393	1,382	526	247	279	216	107	109
26	3,694	1,824	1,870	2,924	1,459	1,465	544	255	289	226	110	116
27	3,977	1,961	2,016	3,168	1,578	1,590	568	265	303	241	118	123
28	3,759	1,852	1,907	3,024	1,506	1,518	514	239	275	221	107	114
29	4,038	1,997	2,041	3,229	1,615	1,614	564	263	301	245	119	126
30-34	20,370	10,095	10,275	16,421	8,230	8,190	2,827	1,338	1,489	1,122	527	596
30	3,862	1,916	1,946	3,093	1,552	1,541	548	261	287	221	103	118
31	3,856	1,909	1,947	3,101	1,553	1,548	537	255	282	218	101	117
32	3,972	1,966	2,006	3,189	1,596	1,593	559	265	294	224	105	119
33	4,184	2,066	2,118	3,391	1,694	1,697	571	268	303	222	104	118
34	4,495	2,238	2,257	3,647	1,836	1,811	612	289	323	237	113	124
35-39	22,727	11,286	11,441	18,644	9,353	9,291	2,962	1,398	1,565	1,121	535	586

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female

Population in thousands

35	4,529	2,251	2,279	3,692	1,852	1,840	602	286	316	236	113	123
36	4,513	2,239	2,274	3,710	1,860	1,850	585	275	310	218	104	114
37	4,574	2,267	2,307	3,756	1,881	1,875	591	277	314	227	109	119
38	4,340	2,151	2,189	3,574	1,790	1,784	557	262	295	209	99	110
39	4,770	2,378	2,392	3,912	1,970	1,942	627	298	329	231	110	120
40-44	22,015	10,906	11,109	18,222	9,120	9,102	2,749	1,293	1,456	1,043	492	551
40	4,637	2,302	2,335	3,827	1,919	1,908	588	278	310	222	106	116
41	4,517	2,238	2,279	3,734	1,869	1,865	568	267	301	215	102	113
42	4,332	2,143	2,189	3,583	1,791	1,792	541	254	287	208	98	109
43	4,249	2,097	2,152	3,507	1,750	1,757	530	248	283	212	99	113
44	4,280	2,126	2,154	3,571	1,791	1,780	522	247	275	187	87	100
45-49	18,972	9,317	9,654	15,879	7,890	7,990	2,215	1,019	1,196	877	409	468
45	4,065	2,006	2,059	3,399	1,695	1,703	478	223	255	188	88	101
46	3,867	1,902	1,965	3,251	1,618	1,632	445	204	241	171	80	92
47	3,742	1,833	1,909	3,106	1,540	1,565	454	207	247	182	85	97
48	3,520	1,722	1,798	2,961	1,466	1,495	399	182	217	160	74	86
49	3,778	1,855	1,923	3,164	1,570	1,594	439	203	236	175	82	93
50-54	15,623	7,610	8,013	13,387	6,589	6,798	1,577	709	868	659	312	347
50	3,615	1,768	1,847	3,079	1,522	1,557	378	171	206	158	74	84
51	3,729	1,825	1,904	3,238	1,600	1,638	349	158	191	143	67	75
52	2,692	1,308	1,384	2,293	1,126	1,167	275	123	152	125	59	65
53	2,774	1,346	1,428	2,369	1,162	1,207	288	128	159	118	56	62
54	2,814	1,363	1,450	2,409	1,179	1,230	288	129	159	116	55	61
55-59	12,315	5,925	6,390	10,593	5,151	5,442	1,240	545	696	481	229	252
55	2,874	1,389	1,485	2,480	1,209	1,271	284	127	157	110	52	58
56	2,552	1,228	1,324	2,192	1,068	1,124	262	113	148	98	46	51
57	2,434	1,170	1,264	2,088	1,014	1,074	249	109	140	98	47	51
58	2,179	1,045	1,133	1,879	911	968	215	94	121	85	40	45
59	2,276	1,094	1,182	1,955	949	1,006	230	101	129	91	44	47
60-64	10,171	4,817	5,354	8,768	4,201	4,567	1,019	438	582	384	178	205
60	2,178	1,031	1,147	1,871	895	976	222	96	126	85	40	45
61	2,023	963	1,060	1,745	840	905	200	86	114	78	37	41
62	2,000	946	1,054	1,718	822	895	205	88	117	77	36	41
63	2,034	966	1,067	1,768	851	918	194	83	111	72	33	39
64	1,936	910	1,026	1,665	792	873	198	86	112	72	32	40
65-69	9,497	4,363	5,134	8,256	3,829	4,427	929	399	530	313	136	178
65	1,906	886	1,020	1,632	768	864	204	87	117	70	31	39
66	1,886	871	1,015	1,632	760	872	190	83	107	63	27	36
67	1,949	896	1,052	1,695	789	906	191	81	110	63	27	36
68	1,881	863	1,018	1,647	762	885	174	75	99	60	26	34
69	1,876	847	1,030	1,648	749	899	170	73	97	58	25	34
70-74	8,723	3,836	4,887	7,751	3,432	4,319	724	298	426	248	106	142
70	1,878	844	1,034	1,653	750	904	169	70	99	56	24	32
71	1,792	794	998	1,586	708	879	154	64	90	51	22	29
72	1,740	768	972	1,544	686	858	144	60	84	52	22	30
73	1,682	729	953	1,505	656	849	131	54	77	46	19	27
74	1,632	702	930	1,463	633	830	126	50	76	43	18	25
75-79	7,158	2,985	4,173	6,433	2,694	3,739	550	216	334	175	75	100

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female

Population in thousands

75	1,567	667	900	1,401	599	802	124	51	74	42	18	24
76	1,538	653	885	1,389	592	797	112	45	67	37	16	21
77	1,460	612	848	1,316	555	761	109	42	67	36	16	20
78	1,348	551	796	1,211	498	713	105	40	65	32	14	18
79	1,245	501	744	1,116	450	666	100	39	61	29	13	17
80-84	4,695	1,758	2,937	4,272	1,604	2,669	324	112	212	98	42	56
80	1,103	431	672	1,002	393	609	78	28	50	23	10	13
81	1,013	389	624	923	356	568	70	25	45	21	9	12
82	933	350	583	852	320	531	62	21	40	19	8	11
83	871	316	555	795	289	506	58	19	39	18	8	10
84	775	272	503	700	246	455	57	19	38	17	7	10
85-89	2,537	811	1,725	2,310	735	1,575	176	56	120	50	20	30
85	661	224	436	602	204	398	46	15	31	13	5	8
86	571	189	382	522	171	351	38	12	25	11	5	7
87	500	157	343	455	142	313	35	11	24	10	4	6
88	433	132	301	393	119	274	32	10	22	9	3	5
89	371	109	262	338	98	240	26	8	18	7	3	4
90-94	1,111	293	818	1,001	260	740	88	24	64	22	9	13
90	317	89	228	288	80	207	23	7	16	6	2	4
91	260	70	189	235	63	172	20	6	14	5	2	3
92	213	55	158	192	49	143	17	5	12	4	2	3
93	181	45	136	161	39	122	16	4	12	4	1	2
94	141	34	107	125	29	96	12	3	9	3	1	2
95-99	322	70	253	283	59	223	32	8	25	7	3	5
95	108	25	83	95	21	74	10	3	7	2	1	1
96	78	17	61	69	15	54	7	2	5	2	1	1
97	64	14	51	55	11	44	8	2	6	2	1	1
98	44	9	35	38	7	30	5	1	4	1	0	1
99	28	5	23	25	5	20	3	1	2	1	0	0
100+	57	10	47	48	8	40	7	1	6	2	0	1
0-14	59,950	30,673	29,278	47,019	24,100	22,918	9,629	4,885	4,744	3,303	1,687	1,615
15-44	121,994	60,925	61,069	98,394	49,570	48,824	17,117	8,195	8,922	6,483	3,159	3,324
45-64	57,080	27,669	29,411	48,628	23,830	24,798	6,052	2,711	3,341	2,401	1,128	1,272
15+	213,175	102,721	110,454	177,375	86,022	91,353	26,000	12,021	13,979	9,799	4,678	5,121
45+	91,181	41,796	49,385	78,981	36,452	42,530	8,883	3,825	5,057	3,317	1,519	1,797
65+	34,100	14,127	19,974	30,354	12,622	17,732	2,831	1,114	1,717	916	391	525
75+	15,880	5,928	9,952	14,347	5,361	8,986	1,179	418	761	355	149	205
85+	4,027	1,185	2,842	3,641	1,063	2,578	304	90	215	81	32	49

APPENDIX D

UNWEIGHTED FREQUENCIES FOR SELECTED VARIABLES

	NEWBORN INFANTS	NON-NEWBORNS
SURVEY YEAR		
98	35,250	272,225
UNITS FOR AGE		
1=Years	0	263,930
2=Months	0	5,715
3=Days	35,250	2,578
AGE GROUPS		
Under 15	35,250	24,993
15-44	0	90,277
45-64	0	56,933
65 & Up	0	100,022
SEX		
1=Male	18,081	107,379
2=Female	17,169	164,846
RACE		
1=White	18,685	152,798
2=Black	4,289	35,520
3=AmInd/Esk	803	7,945
4=Asian/PI	1,172	6,531
5=Other	1,970	9,213
9=NotStated	8,331	60,218
MARITAL STATUS		
1=Married	0	39,703
2=Single	11,163	24,374
3=Widowed	0	13,545
4=Divorced	0	4,844
5=Separated	0	881
9=NotStated	24,087	188,878
DISCHARGE STATUS		
1=Routine	32,569	207,655
2=LAMA	8	2,306
3=TrShtTrm	383	7,828
4=TrLngTrm	47	20,896
5=Alive,NS	2,060	25,276
6=Dead	125	6,905
9=NotStated	58	1,359
LENGTH OF STAY FLAG		
0=LT 1 day	400	5,286
1=1 day or more	34,850	266,939

	NEWBORN INFANTS	NON-NEWBORNS
REGION		
1=NorthEast	6,633	60,972
2=MidWest	9,740	79,505
3=South	12,002	94,888
4=West	6,875	36,860
BEDSIZE		
1=6-99	2,616	26,634
2=100-199	8,300	63,284
3=200-299	9,728	64,933
4=300-499	10,003	81,784
5=500 & over	4,603	35,590
HOSPITAL OWNERSHIP		
1=Proprietary	2,225	18,246
2=Government	3,136	27,319
3=Nonprofit	29,889	226,660
EXPECTED SOURCE OF PAYMENT, PRINCIPAL		
01=Worker's Comp	8	1,893
02=Medicare	61	99,452
03=Medicaid	9,718	37,296
04=Other Govt	288	2,405
05=Blue Cross/Blue Shield	3,924	21,273
06=HMO/PPO	6,549	27,694
07=Other Priv	9,249	49,838
08=Self Pay	1,865	12,929
09=No Charge	86	947
10=Other	3,143	16,562
99=Not Stated	359	1,936
DISCHARGE MONTH		
01=January	3,037	25,132
02=February	2,868	23,159
03=March	3,180	24,172
04=April	2,881	23,465
05=May	3,059	23,847
06=June	3,015	23,054
07=July	3,110	23,030
08=August	3,055	22,511
09=September	3,030	21,960
10=October	2,756	21,248
11=November	2,582	20,125
12=December	2,677	20,522

	NEWBORN INFANTS	NON-NEWBORNS
FIRST-LISTED DIAGNOSIS		
VCODES	35,250	42,952
CHAPTER 1	0	7,705
CHAPTER 2	0	15,205
CHAPTER 3	0	11,157
CHAPTER 4	0	3,428
CHAPTER 5	0	18,014
CHAPTER 6	0	4,677
CHAPTER 7	0	52,228
CHAPTER 8	0	28,388
CHAPTER 9	0	25,163
CHAPTER 10	0	14,063
CHAPTER 11	0	4,648
CHAPTER 12	0	4,279
CHAPTER 13	0	12,950
CHAPTER 14	0	2,101
CHAPTER 15	0	1,789
CHAPTER 16	0	2,242
CHAPTER 17	0	21,236

WEIGHTED FREQUENCIES FOR SELECTED VARIABLES

	NEWBORN INFANTS	NON-NEWBORNS
SURVEY YEAR		
98	3,837,724	31,826,545
UNITS FOR AGE		
1=Years	0	31,064,660
2=Months	0	542,550
3=Days	3,837,724	219,335
AGE GROUPS		
Under 15	3,837,724	2,298,531
15-44	0	10,376,428
45-64	0	6,695,652
65 & Up	0	12,455,934
SEX		
1=Male	1,976,304	12,468,847
2=Female	1,861,420	19,357,698
RACE		
1=White	2,235,816	20,620,239
2=Black	437,909	3,750,056
3=AmInd/Esk	35,020	252,713
4=Asian/PI	121,990	506,330
5=Other	195,622	913,594
9=Not Stated	811,367	5,783,613
MARITAL STATUS		
1=Married	0	9,373,706
2=Single	2,366,071	5,515,649
3=Widowed	0	3,247,697
4=Divorced	0	1,131,012
5=Separated	0	159,841
9=NotStated	1,471,653	12,398,640
DISCHARGE STATUS		
1=Routine	3,619,872	24,863,343
2=LAMA	2,120	249,089
3=TrShtTrm	47,979	1,274,207
4=TrLngTrm	4,483	2,564,182
5=Alive,NS	132,120	1,922,213
6=Dead	13,120	819,559
9=Not Stated	18,030	133,952
LENGTH OF STAY FLAG		
0=LT 1 day	50,241	720,348
1=1 day or more	3,787,483	31,106,197

	NEWBORN INFANTS	NON-NEWBORNS
REGION		
1=NorthEast	731,478	6,818,497
2=MidWest	865,737	7,365,774
3=South	1,328,003	12,021,611
4=West	912,506	5,620,663
BEDSIZE		
1=6-99	685,333	6,576,483
2=100-199	943,698	8,238,144
3=200-299	709,042	6,039,375
4=300-499	1,073,338	7,734,202
5=500 & over	426,313	3,238,341
HOSPITAL OWNERSHIP		
1=Proprietary	427,914	3,473,471
2=Government	448,220	3,720,926
3=Nonprofit	2,961,590	24,632,148
EXPECTED SOURCE OF PAYMENT, PRINCIPAL		
01=Worker's Comp	1,353	229,237
02=Medicare	12,043	12,412,921
03=Medicaid	1,126,792	4,315,564
04=Other Govt	56,429	411,830
05=Blue Cross/Blue Shield	409,119	2,348,978
06=HMO/PPO	763,139	3,630,196
07=Other Priv	996,624	5,596,519
08=Self Pay	226,868	1,471,937
09=No Charge	12,907	112,311
10=Other	163,176	916,297
99=Not Stated	69,274	380,755
DISCHARGE MONTH		
01=January	325,003	2,970,942
02=February	305,604	2,715,798
03=March	348,724	2,876,749
04=April	321,572	2,758,591
05=May	329,685	2,756,393
06=June	325,708	2,711,668
07=July	341,060	2,607,306
08=August	315,999	2,546,811
09=September	321,521	2,520,738
10=October	302,326	2,538,498
11=November	284,070	2,369,173
12=December	316,452	2,453,878

	NEWBORN INFANTS	NON-NEWBORNS
FIRST-LISTED DIAGNOSIS		
VCODES	3,837,724	4,892,064
CHAPTER 1	0	866,409
CHAPTER 2	0	1,706,114
CHAPTER 3	0	1,331,587
CHAPTER 4	0	357,884
CHAPTER 5	0	1,973,603
CHAPTER 6	0	510,966
CHAPTER 7	0	6,272,279
CHAPTER 8	0	3,403,163
CHAPTER 9	0	3,045,582
CHAPTER 10	0	1,720,014
CHAPTER 11	0	512,259
CHAPTER 12	0	516,588
CHAPTER 13	0	1,534,004
CHAPTER 14	0	196,637
CHAPTER 15	0	150,446
CHAPTER 16	0	296,889
CHAPTER 17	0	2,540,057

	NEWBORN INFANTS	NON-NEWBORNS
ALL-LISTED DIAGNOSES		
TOTAL	7,611,845	135,675,868
ECODES	4,656	3,907,814
VCODES	4,724,402	11,000,355
CHAPTER 1	37,837	3,565,760
CHAPTER 2	13,494	4,455,629
CHAPTER 3	16,520	13,262,597
CHAPTER 4	4,551	4,132,701
CHAPTER 5	75	8,396,048
CHAPTER 6	12,848	3,325,978
CHAPTER 7	23,105	28,995,544
CHAPTER 8	13,098	10,110,670
CHAPTER 9	25,550	8,484,018
CHAPTER 10	28,645	7,185,764
CHAPTER 11	322	8,576,368
CHAPTER 12	22,311	1,725,090
CHAPTER 13	12,184	4,870,312
CHAPTER 14	287,597	635,326
CHAPTER 15	2,320,926	408,807
CHAPTER 16	56,760	6,676,343
CHAPTER 17	6,964	5,960,744
ALL-LISTED PROCEDURES		
TOTAL	2,656,795	41,499,972
CHAPTER 1	39,911	1,061,819
CHAPTER 2	0	95,811
CHAPTER 3	1,178	121,720
CHAPTER 4	767	57,499
CHAPTER 5	3,775	287,848
CHAPTER 6	19,041	1,003,500
CHAPTER 7	120,903	5,790,978
CHAPTER 8	0	333,805
CHAPTER 9	12,241	5,116,425
CHAPTER 10	1,135	946,024
CHAPTER 11	1,250,574	297,910
CHAPTER 12	179	2,186,828
CHAPTER 13	732	6,640,424
CHAPTER 14	1,733	3,257,170
CHAPTER 15	8,007	1,324,868
CHAPTER 16	1,196,619	12,977,343