

**Overview of the HCUP American Hospital Association
Annual Survey SAS[®] Databases**

1987-2010

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INTRODUCTION

The American Hospital Association (AHA) conducts an annual survey of hospitals in the United States and associated territories and produces an Annual Survey Database™. This database includes data elements containing demographic, utilization, financial, and other hospital characteristics of interest to health care researchers. Examples include:

- Beds
- Inpatient days
- Employees
- Medical staff
- Financial information
- Organizational structure (e.g., ownership and control).

Each year the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality (AHRQ), licenses the Annual Survey Database from the AHA. HCUP database developers reprocess the AHA Annual Survey Databases into Statistical Analysis System (SAS®) research databases with uniform data element names and coding across years. The HCUP databases contain the AHA Annual Survey data elements and additional hospital characteristics indicators calculated from the AHA data. HCUP uses AHA data for a variety of purposes, including the following:

- Identifying U.S. community, non-rehabilitation hospitals for the NIS and KID (AHA data element Z998 = 1).
- Stratifying, sampling, and weighting hospitals and discharges for the NIS and KID.
- Linking hospital characteristics values to patient data for research.

This overview describes the contents, construction, and documentation of the HCUP AHA Annual Survey SAS Databases. Its purpose is to help researchers understand and utilize the data and documentation.

AHA ANNUAL SURVEY DATA

AHA Registered Hospitals

Any institution that meets the AHA's requirements to be classified as a hospital may be registered by the AHA. Registered hospitals include AHA member hospitals as well as nonmember hospitals. For a complete listing of the criteria used for registration, please see *Registration Requirements for Hospitals* at http://www.aha.org/aha/resource-center/Statistics-and-Studies/REGISTRATION_FY_08.pdf.

The AHA includes both registered and non-registered hospitals in the AHA Annual Survey Database, but they only include registered community hospitals in their reports, such as *Hospital Statistics*. However, HCUP includes both registered and non-registered community hospitals from the AHA Annual Survey Database in the NIS hospital universe. For example, for 2010, there were 333 U.S. community, non-rehabilitation hospitals in the 2010 NIS hospital universe that were not registered as hospitals by the AHA.

Consistency of Data Elements across Years

The 1987-2010 AHA Annual Survey Databases provide information corresponding to hospital fiscal years. Although most data elements are consistently represented across years, data element lists do vary annually. This is because the AHA updates the Annual Survey instrument each year, adding some data elements and deleting others from the survey.

The 2010 American Hospital Association (AHA) Annual Survey Database added 78 new data elements and dropped 25 data elements. New in this release are data on the total number of physicians with shared responsibility for risk, supply expenses, staffing vacancies, privileged physicians by type of relationship, total number of hospitalists and intensivists, advance practice registered nurses and distributors.

Beginning with 2010 data, we assigned the hospital stratifier data elements (named like HOSP_ and ST_) for all hospitals, not just for U.S. community hospitals.

The 2009 American Hospital Association (AHA) Annual Survey Database added 35 new data elements and dropped 18 data elements. The new data elements were mostly from Survey Section C, *Facilities and Services*, but include a few other data elements, such as the type of triage system used by the emergency department, as well.

For consistency with the HCUP state databases, beginning with 2009 data we corrected the name of the "Hospital Location: NCHS Urban-Rural Code (V2006)" data element as follows:

- Previous Name: HL_NHCS2006
- New Name: HL_NCHS2006

The 2008 American Hospital Association (AHA) Annual Survey Database added 33 new data elements and dropped seven data elements. The new data elements were mostly from Survey Section C, *Facilities and Services*, but also include the National Provider Identifier (NPI).

The 2007 American Hospital Association (AHA) Annual Survey Database added 81 new data elements and dropped one data element. The new data elements were mostly from Survey Section C, *Facilities and Services*. In addition, beginning with 2007 HCUP added nine new hospital data elements, calculated from existing AHA data elements. Also, beginning with the 2007 AHA Database, we retain the AHA names for new data elements rather than renaming them based on previous HCUP naming conventions for AHA data elements.

The 2006 American Hospital Association (AHA) Annual Survey Database added 23 new data elements and restored 12 data elements that were available for earlier years, but were not available for 2005. These new or restored data elements were mostly from Survey Section E, *Total Facility Beds, Utilization, Finances and Staffing*. No data elements were dropped for 2006.

The 2005 American Hospital Association (AHA) Annual Survey Database included 68 new data elements and omitted four previously available data elements, mostly from Survey Section C, *Facilities and Services*. HCUP added four new urban/rural indicators assigned from either the hospital ZIP Code or county and deleted four old urban/rural indicators. HCUP also added the unmodified Hospital FIPS state/county code (HFIPSSTCO) for linkage to the Area Resource File. We dropped all the raw service availability flags because they were identical to the uniform service availability flags.

The 2004 AHA database added 63 new data elements and deleted 35 previously available data elements, mostly from Survey Section C, *Facilities and Services*. The AHA also replaced the Metropolitan Statistical Area (MSA) data elements (Z130, Z131, and Z133-Z135) with new Core Based Statistical Area (CBSA) data elements (Z136-Z138).¹ We used the new CBSA data elements in place of the old MSA data elements to assign Z120 and the NIS hospital strata data elements. We also added nine new urban/rural indicators assigned from either the hospital ZIP Code or county.

The 2003 AHA database added 71 new data elements and deleted eight previously available data elements. There were 36 new data elements from Survey Section C, *Facilities and Services*, and 35 new data elements from Survey Section E, *Total Facility Beds, Utilization, Finances and Staffing*. The 2002 AHA database added 35 new data elements, mostly from Survey Section C, *Facilities and Services*. Beginning with the 2001 AHA database, HCUP added a new data element (Z998) to identify the universe of U.S. community, non-rehabilitation hospitals, as defined for the Nationwide Inpatient Sample (NIS). Also in 2001, the AHA deleted three data elements from Survey Section B, *Organizational Structure*. The 2000 database included 28 new service data elements and dropped five previously available data elements, all from Survey Section B, *Organizational Structure*. The 1999 database included four new group purchasing data elements. The 1998 database included 40 new data elements, mostly service data elements, and dropped nine previously available data elements, primarily from Survey Section B, *Organizational Structure*. The 1997 database included a number of new data elements.

The 1994-1996 databases contained the same set of data elements. The AHA redesigned the survey in 1994 and made major changes to the survey instrument. In the redesign, the AHA dropped many data elements, added or split others into separate categories, and changed the definitions of some data elements. Less than half of the data elements in the 1994 database were consistent with the previous year. From 1987 to 1993, most of the data elements were consistent from year to year.

¹ There are two main differences between the MSA and CBSA classifications. First, the CBSA groups are based on 2000 Census data, whereas the MSA groups were based 1990 Census data. Second, the criteria for classifying the counties differ. In both systems, a Metropolitan County is defined as a county containing a single urban area with a population of greater than 50,000, or an adjacent county that does not meet these criteria itself, but has strong connections to the Metro County. However, the criteria for both delineating urban areas and for assigning Metro status to adjacent counties differ substantially. In addition, a new category was also added to the CBSA to differentiate some of the residual mass of non-Metro Counties. These are the Micropolitans, with an urban area population of at least 10,000 or adjacency requirements analogous to those for Metros.

Data Features of Note

The definitions of most data elements remain constant from one year to the next. There are, however, some exceptions to consider. This section highlights significant changes in data element coding.

1. Beginning with the 1994 HCUP AHA SAS Database, discharges (B005, B005H, B005N) are imputed to be equal to admissions (B003, B003H, B003N), because the AHA dropped the discharges data elements from the file. Note that the AHA admissions, discharges, and inpatient days totals do not include newborns (B903).
2. Naming and coding of service and raw service availability data elements changed beginning with the 1994 database. Prior to 1994, service availability was coded in a single data element that may have been assigned based on the number of beds for that service. Service and raw service data elements have been split out, so that for each service type there are now four data elements defining service availability at the hospital, health system, network, and joint-venture levels.

For example, prior to 1994, raw service availability values were coded as single data elements with the following possible values:

- 1 = Provided by hospital
- 3 = Provided by another hospital or provider
- 4 = Service not available.

The resulting service data element had one of the following values:

- 0 = Service not available or provided by another hospital
- 1 = Hospital-based service available.

Beginning with the 1994 database, raw service and service data elements are coded with the following suffixes:

- [Blank] = Hospital or subsidiary
- S = Health system (locally)
- K = Network (locally)
- V = Joint venture (locally).

Raw service availability values are coded with the following possible values in the 1994 database:

- 1 = Provider
- 2 = Not provider.

Beginning with the 1995 database, raw service availability values are coded with the following possible values:

1 = Provider
0 = Not provider.

The resulting service data element has one of the following values:

0 = Service not available
1 = Service available.

Consider the following example of the service data elements for "GENERAL MEDICAL AND SURGICAL CARE (ADULT)":

SAS		
Data Element	Item	
<u>Name</u>	<u>Name</u>	<u>Description</u>
S011	GENHOS	Hospital or Subsidiary
S011S	GENSYS	Health System (locally)
S011K	GENNET	Network (locally)
S011V	GENVEN	Joint Venture (locally)

Prior to the 1994 database, AHA surveys coded the service simply as S011, with values indicative of the service level.

3. Prior to the 1995 database, most of the raw binary (yes/no) data elements had the following values:

1 = Yes
2 = No.

Beginning with the 1995 database, the values of most of the raw binary (yes/no) data elements changed to the following values:

1 = Yes
0 = No.

4. The coding of A500, AHA Membership Code, changed beginning with the 1997 database to the following values:

Y = AHA MEMBER
N = NOT AN AHA MEMBER.

A500 was coded as follows in the 1995 and 1996 databases:

01 = YES (REGISTERED A.H.A. MEMBER)

00 = NO (NONREGISTERED A.H.A. MEMBER).

Prior to the 1995 AHA database, the values of A500 were coded as follows:

01= REGISTERED, SHORT-TERM, A.H.A. MEMBER

03 = REGISTERED, LONG-TERM, A.H.A. MEMBER

50 = REGISTERED, NON-A.H.A. MEMBER

53 = NONREGISTERED, NON-A.H.A MEMBER

OM = NONREGISTERED, OSTEOPATHIC MEMBER OF A.O.H.A.

ON = NONREGISTERED OSTEOPATHIC NONMEMBER OF A.O.H.A

25 = NONREGISTERED, PROVISIONAL A.H.A. MEMBER.

5. In the 1997-2001 databases, the values of the following imputation flags were questionable because they were always equal to zero: I_E100H and I_E200H.
6. Prior to the 1998 database, the service data elements were set to zero both when the service was not available, and when the value was missing for non-responding hospitals. Starting with the 1998 database, they are set to missing when the corresponding raw AHA input data element is missing.
7. Prior to the 1998 database, the following data elements were coded in the AHA Annual Survey Databases and the HCUP SAS databases using numeric AHA state codes with values ranging from 3-95:

SAS

Data AHA

Element Item

Name Name Description

A210C MNGTSTCD MANAGEMENT ORGANIZATION STATE CODE

A230C ALL1STCD FIRST ALLIANCE STATE CODE

A260C MHSSTCD HEALTH CARE SYSTEM STATE CODE

Starting with the 1998 database, the coding of the data elements changed to two-character state postal codes in both the AHA survey data and the HCUP SAS files.

8. In the 2000 database, the values of A210A and A210B appeared in upper case only; in contrast, in the 2001 database, the values appeared in both upper and lower case.

9. In the 2001 database, the values of the following imputation flags were always missing: I_B012H, I_B015H, I_B022H, and I_B025H.
10. Beginning with the 2002 database, the AHA added the following four new hospital service categories for the A503 and Z210 data elements:
 - 41: Cancer
 - 42: Heart
 - 80: Acute Long-Term Care
 - 90: Children's Acute Long-Term Care.
11. In the 2002 database, the values of the following data elements were questionable because they are always missing or equal to zero: A313 and A314.
12. In the 2003 database, the values of the following data elements were questionable because they are always missing or equal to zero: A313, A314, I_E100H, and I_E200H.
13. In the 2003 and 2004 databases, the following imputation flags each had only one non-missing value: I_B012H, I_B015H, I_B022H, and I_B025H.
14. In the 2003-2004 databases, the values of the following data elements were always missing or equal to one: A504, E126B, E126C, E126D, E126E, and E126F. It appears that zero values were missing for these data elements.
15. In the 2004 database, the value of the following imputation flag was questionable because it was always equal to zero: I_E200H.
16. In the 2005 database, the values of the following imputation flags were questionable because they were always equal to zero: I_B002H, I_B002N, I_B003H, I_B003N, I_B012H, I_B012N, I_B015H, I_B015N, I_B022H, I_B022N, I_B025H, I_B025N, I_E100H, and I_E200H.
17. In the 2005 database, the values of the following data elements were always missing or equal to one: A260, A504, E126B, E126C, E126D, E126E, and E126F. It appears that zero values were missing for these data elements.
18. In the 2006 database, the values of the following imputation flags were questionable because they were always equal to zero: I_B002H, I_B002N, I_B003H, I_B003N, I_B012H, I_B015H, I_B015N, I_B022H, I_B022N, I_B025H, I_B025N, I_E200H, and I_E292.
19. In the 2006-2009 databases, the values of the following data elements were always missing or equal to one: A260, E126B, E126C, E126D, E126E, and E126F. It appears that zero values were missing for these data elements.

20. In the 2006 database, the values of A421-A423 changed from “Y” or blank to “1” or “2” for “Yes” or “No,” respectively.
21. In the 2007 database, the values of the following imputation flags were questionable because they were always equal to zero: I_B012H, I_B015H, I_B022H, I_B025H, I_B100H, I_E100H, I_E200H, and I_E292.
22. In the 2008 database, the values of the following data elements were questionable because they were always equal to zero: I_B002H, I_B002N, I_B003H, I_B003N, I_B012H, I_B012N, I_B015H, I_B015N, I_B022H, I_B022N, I_B025H, I_B025N, I_E100H, I_E200H, I_E292, S391, S391S, S391K, and S391V.
23. In the 2009 database, the values of the following data elements were questionable because they were always equal to zero: A603, I_B012H, I_B015H, I_B022H, I_B022N, I_B025H, I_E100H, I_E200H, and I_E292. Also, the values of E059H and E126F were always missing.
24. In the 2010 database, the values of the following imputation flags were questionable because they were always equal to zero: I_B012H, I_B015H, I_B022H, I_B025H, I_E100H, I_E200H, and I_E292.
25. In the 2010 database, the values of the following data elements were always missing or equal to one: A210, A260, A261, A266, CLSMSI, CLSCIC, CLSNIC, CLSPIC, CLSOIC, CLSINT, and SUPPLY. It appears that zero values were missing for these data elements.

UNIFORM SAS RESEARCH DATABASE CONSTRUCTION

HCUP database developers reprocess the AHA Annual Survey Databases into SAS research databases with uniform data element names and coding across years. The HCUP databases contain the AHA Annual Survey data elements and additional hospital characteristics indicators calculated from the AHA data. The uniform data element SAS names and labels adhere to the conventions described below.

Data Element Naming Conventions

The SAS data element names consist of three elements: a prefix, a three-digit numeric root, and a suffix.

Prefixes

Survey data contain nine basic categories of hospital descriptive data elements defined by the data element name prefix, as follows:

- A: Affiliations and associations
- B: Beds and utilization
- E: Employment and personnel
- F: Financial data elements
- M: Medical staff data elements
- N: Health care reform orientation data elements
- S: Service available flags, where:

- 0 = service not available or provided by another hospital, and
- 1 = hospital-based service available

- V: Outpatient services
- Z: Core data elements.

In addition, in each survey year there are hospitals that either do not respond to the survey or do not supply data for some questions. To document these occurrences, the databases include imputation flags for key data elements to indicate when these data elements are reported by the hospital, estimated by the AHA, or expanded by the AHA. These imputation flags are defined by the following prefix:

I_: Imputation flags, where:

- 0 = Reported by hospital
- 1 = Estimated by the AHA
- 2 = Expanded by the AHA.

Finally, service data elements written to the HCUP files were originally read from the AHA Annual Survey data as raw service available flags defined by the following prefix:

X_: Raw service available flags, where

◇ Survey years through 1993 are coded:

- 1 = Hospital-based service available
- 2 = Service provided by another hospital or provider
- 3 = Service not available.

◇ Survey year 1994 is coded:

- 1 = Provider
- 2 = Not provider.

◇ Survey years beginning in 1995 are coded:

- 1 = Provider
- 0 = Not provider.

Beginning with the 2005 survey year, we dropped the raw service availability flags, because beginning with the 1998 survey year, these flags are identical to the uniform service availability flags.

Numeric Roots

Each HCUP AHA SAS data element name also contains a numeric root in the last numeric column of the name. Some numeric roots further describe data elements as follows:

- 0: Describes a total figure
- 8: Describes miscellaneous data elements
- 9: Describes "other" data elements.

For example, the data element B200 ends with "0" and refers to a total count for "inpatient days, all hospital units."

Numeric roots of 9 generally describe "other" data elements that are part of a total. For example, B259 is the data element for "inpatient days, other subacute care."

Numeric roots of 8 are often used with miscellaneous data elements that don't have a clear affiliation. For example, B238 represents "inpatient days, other special care units."

Whenever possible, data element roots were kept consistent within and across classes of data elements. For example, the last digits are the same for:

E163, which represents "full-time employment, physical therapists," and

E263, which represents "part-time employment, physical therapists."

Similarly:

B114 represents "beds setup, OB unit beds," while

S014 represents "service availability flag, OB unit."

Suffixes

Each data element name suffix further describes the data element:

- A-G, J: These data elements are the components of an overall total, or the components of a sum or union of binary data elements (data elements with G suffixes are reported beginning in 1992; data elements with J suffixes are reported beginning in 1997).
- H: Defines a hospital data element.
- K: Defines service provided by "network (locally)" [reported beginning in 1994].
- N: Defines a nursing home data element.
- S: Defines service provided by "health system (locally)" [reported beginning in 1994].
- V: Defines service provided by "joint venture (locally)" [reported beginning in 1994].

Other Data Elements

Note that there are some data elements assigned by HCUP that are exceptions to the above naming conventions. AHAYEAR, HFIPSSTCO, HOSPST, and HOSPSTCO are HCUP linkage data elements used to link to other HCUP databases. LOCTEACH and data elements prefixed with "HOSP_" or "ST_" are HCUP hospital stratification data elements, derived from AHA survey data, used for nationwide sampling and weighting. Data elements prefixed with "HL_" are urban/rural indicators assigned from either the hospital ZIP Code or county. IDNUMBER and SYSTEM are hospital and system identification numbers used in different data files, and therefore do not follow normal naming conventions. IDNUMBER is a modified AHA hospital identifier, without the leading six. Also, beginning with the 2007 AHA Database, we retain the AHA names for new data elements rather than renaming them based on previous HCUP naming conventions for AHA data elements.

Data Element Labeling Conventions

The SAS labels for the data elements may include any of the following suffixes:

- T: Total facility
- H: Hospital
- N: Nursing home
- @: Binary (yes/no) data element
- ! Data element is inconsistent over time (at any point from 1987 to 2010).

The "!" label suffix identifies data elements that have experienced a change in definition during the 1987-2010 period. This is usually caused by changes to survey questions or data values in a given year.

HCUP AHA ANNUAL SURVEY DATABASE DOCUMENTATION

The AHA Annual Survey Database documentation on the HCUP Website describes the construction and content of the HCUP AHA databases, providing researchers with a comprehensive reference tool and additional insights into the file conversion process. This will help researchers understand and utilize the HCUP AHA databases. The documentation includes the following sections, described in detail below:

I. GENERAL AHA INFORMATION

- Overview of the HCUP American Hospital Association Annual Survey SAS[®] Databases (this document)

II. SPECIAL REPORTS

- AHA Survey Changes
- AHA Hospital Changes

III. DESCRIPTION OF DATA ELEMENTS

- AHA Annual Survey SAS Database Construction Index
- AHA Annual Survey Description of Data Elements
- AHA Annual Survey File Layout
- Annotated AHA Annual Survey Instrument
- 1987-2010 HCUP AHA SAS Databases Data Element Availability

IV. SUMMARY STATISTICS

- Summary Statistics (Proc Contents, Means, and Frequencies)

V. PROCESSING PROGRAMS

- HCUP AHA Annual Survey Database: SAS Load Program
- HCUP AHA Annual Survey Database: Summary Statistics Program

VI. SAS DATABASE INFORMATION

- HCUP AHA SAS Database Information.

Special Reports

The year-specific special reports describe the construction of the AHA files, the changes from year to year, and the source data files.

AHA Survey Changes

This document describes AHA Annual Survey Database changes, such as new and revised items, renamed items, and reordered items.

AHA Hospital Changes

This section displays facility changes since the previous year, including openings, closings, mergers, and splits.

Description of Data Elements

The documents available in the Description of Data Elements section detail the coding of data elements in the AHA files and the availability across years.

HCUP AHA Annual Survey Database Construction Index

Prior to the 2005 survey year, the HCUP AHA Annual Survey Database Construction Index provided a cross-reference of the HCUP SAS data element names with the AHA Annual Survey item numbers, item names, and survey page numbers. Beginning with the 2005 survey year, the HCUP AHA Annual Survey Database Construction Index has been discontinued because the HCUP AHA SAS Databases Data Element Availability Table now includes a cross-reference of the HCUP SAS data element names with the AHA Annual Survey item names. Also, the AHA Annual Survey Database File Layout shows the AHA item number and survey question number for each AHA item.

Description of Data Elements for AHA

This table, provided by the AHA, describes the data elements in the AHA Annual Survey Database. It includes descriptions for control codes, service codes, AHA state codes, bed size codes, city rank codes, Health System Cluster codes, and estimation codes.

AHA Annual Survey Database File Layout

This spreadsheet contains the original AHA Annual Survey Database Public File Layout and Code Descriptions for reference. It also shows the AHA item number and survey question number for each AHA item.

Annotated AHA Annual Survey Instrument

This document is an annotated copy of the survey instrument used by the AHA for the Annual Survey. The SAS data element names assigned to the survey responses during HCUP processing are noted beside all survey items that were used for the HCUP files. This offers researchers a cross-reference between survey questions and the corresponding SAS data element names.

1987-2010 HCUP AHA SAS Databases Data Element Availability

This table lists all data elements available in any HCUP AHA Annual Survey SAS Database since 1987 and indicates years of availability. Beginning with the 2004 survey year, it includes a cross-reference of HCUP SAS data element names with the AHA Annual Survey item names.

Summary Statistics

This section presents descriptive statistics for all data elements in the HCUP AHA Annual Survey SAS Database. Means, minimum, and maximum values are reported for numeric data elements. Frequency distributions are reported for selected categorical data elements. These statistics are used as initial edit-checks to verify the correct processing of AHA data. They are included on the Website as descriptive information about AHA data elements.

Processing Programs

This section contains source listings of the programs used to create and document the HCUP AHA Annual Survey SAS Database.

AHA SAS Load Program

This program creates the HCUP AHA Annual Survey SAS Database. It follows an outline format. Part I processes the data into a uniform SAS database. It includes length statements, input statements, creation of new data elements that do not normally change over time, data element changes for given years which generally remain unchanged thereafter, and data element changes that are essentially one-time fixes. Part II generates descriptive statistics used to perform statistical quality review of the data.

The outline structure of the SAS load program is:

- I. Load the database into SAS using the input statement provided by the AHA
- II. Process the data into HCUP format
 - A. Labels for data elements.
 - B. Length statements.
 - C. Convert original AHA data elements to HCUP data elements
 1. Get data and rename AHA data elements to HCUP names
 2. Convert AHA data elements to HCUP format

- D. New data elements that do not normally change from year to year:
 - 1. Facility & service data elements.
 - 2. Bed & finance data elements.
 - 3. Personnel & payroll data elements.
 - 4. Medical staff data elements.
 - 5. General hospital-descriptive data elements.
 - 6. Stratification data elements for HCUP sampling.
 - 7. Core linkage data elements.
 - 8. Assign urban/rural indicators.
 - 9. Calculate new hospital data elements.

- E. Data element changes for given years which generally remain unchanged thereafter.

- F. One-time annual fixes and comments:
 - 1. One-time annual fixes.
 - 2. One-time fixes from edit checks.
 - 3. Notes regarding data elements that were added or dropped.

III. Generate descriptive statistics

- A. Frequencies of values of state code data elements.
- B. Contents, frequencies and means of new data elements.
- C. Comparison with previous year's survey.
- D. Report of data elements with a standard deviation of missing or zero.

AHA Summary Statistics Program

This SAS program produces the AHA Summary Statistics report. It also adheres to an outline format. It includes a contents listing, means of numeric data elements, and frequencies of values of selected data elements.

The outline structure of the Summary Statistics program consists of:

- I. Summary Statistics
 - A. Database contents
 - B. Means of numeric data elements
 - C. Frequencies of values of selected data elements.

CONCLUSION

The AHA Annual Survey Databases include data elements containing demographic, utilization, financial, and other hospital characteristics of interest to health care researchers. This overview has described the contents, construction, and documentation of the HCUP AHA Annual Survey SAS Databases with the goal of helping researchers understand and utilize the HCUP AHA databases and documentation.