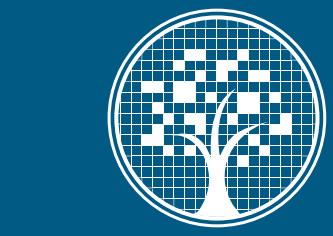

HCUP Methods Series

Comparative Analysis of the HCUP Nationwide Inpatient Sample Release 4 (1995)

Report # 1998-01

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COMPARATIVE ANALYSIS OF HCUP AND NHDS INPATIENT DISCHARGE DATA

EXECUTIVE SUMMARY

This report assesses potential biases of statistics calculated from the Nationwide Inpatient Sample (NIS), Release 4 of the Healthcare Cost and Utilization Project (HCUP). The NIS, Release 4 includes hospital discharge data from a sample of community hospitals for calendar year 1995. Statistics for discharge- and hospital-level characteristics of the NIS data are compared with the National Hospital Discharge Survey (NHDS) data.

Most statistics calculated from the NIS are consistent with those from the NHDS, particularly those for region and patient characteristics. Several differences exist between the NIS and NHDS discharge estimates when discharges are stratified by hospital size. The sample of hospitals in the NIS was stratified on hospital size and weighted to the AHA universe to better represent the universe of hospitals. The NIS estimates of average length of stay appear consistent with the NHDS. NIS estimates of in-hospital mortality rates are higher than the NHDS estimates in all the regions except the Northeast.

Inconsistencies between the NIS estimates and estimates from the NHDS data may be caused by a number of factors. Sample design may cause some differences. Some may be due to differences in coding schemes. In other cases, differences may be attributed to slightly dissimilar populations.

INTRODUCTION

This report assesses potential biases of statistics calculated from the Nationwide Inpatient Sample (NIS), Release 4 of the Healthcare Cost and Utilization Project (HCUP). The NIS, Release 4 includes hospital discharge data from a sample of community hospitals for the calendar year 1995. Statistics for discharge- and hospital-level characteristics of the NIS data are compared with the National Hospital Discharge Survey (NHDS) and the American Hospital Association Annual Survey data.

The NIS, Release 4 was established to provide analyses of hospital utilization across the United States. For each calendar year, the NIS *universe* of hospitals was established as all community hospitals located in the U.S. However, the NIS *sampling frame* was constructed from the subset of universe hospitals that released their discharge data for research use. Currently, the Agency for Health Care Policy and Research (AHCPR) has agreements with 22 data sources that maintain statewide, all-payer discharge data files to include their data in the HCUP database. However, only 19 of these states could be included for this fourth release. These 19 states represent the addition of two states more than the second and third releases, and eight states more than the first release, as shown by Table 1. The NIS, Release 4 is composed of all discharges from a sample of hospitals from these frame states.

Table 1. States in the Frame for the NIS, Release 4

Calendar Years	States in the Frame
1988 (Release 1)	California, Colorado, Florida, Illinois, Iowa, Massachusetts, New Jersey, and Washington
1989-1992 (Release 1)	Add Arizona, Pennsylvania, and Wisconsin
1993 (Release 2) 1994 (Release 3)	Add Connecticut, Kansas, Maryland, New York, Oregon, and South Carolina
1995 (Release 4)	Add Missouri and Tennessee

Creation of the NIS was subject to certain restrictions.

- The Illinois Health Care Cost Containment Council stipulated that no more than 40 percent of Illinois discharge data could be included in the database for any calendar quarter. Consequently, approximately 50 percent of the Illinois community hospital universe was randomly selected for the frame each year.

- Hospitals in Missouri were allowed to withhold their data from the NIS. Thirty-five Missouri hospitals, from a state total of 119, chose not to participate in the NIS.

- South Carolina and Tennessee both imposed "small strata/cell restrictions," requiring the NIS to exclude hospitals, when only one state hospital appears in a sampling strata. As a result, the NIS is not representative of South Carolina or Tennessee hospitals.

To improve the generalizability of the NIS estimates, five hospital sampling strata were used:

1. *Geographic Region* — Midwest, Northeast, West, and South.

2. *Ownership* — government, investor-owned, and nonprofit nongovernment.

3. *Location* — urban and rural.

4. *Teaching Status* — teaching and non-teaching.

5. *Bedsize* — small, medium, and large, specific to the hospital's location and teaching status as shown in Table 2.

Table 2. Bedsize Categories

Location and Teaching Status	Bedsize		
	Small	Medium	Large
Rural	1-49	50-99	100+
Urban, non-teaching	1-99	100-199	200+
Urban, teaching	1-299	300-499	500+

To further ensure geographic representativeness, hospitals were sorted by state and the first three digits of their zip code prior to systematic sampling.

The NIS is a stratified probability sample of hospitals in the frame, with sampling probabilities calculated to select 20 percent of the universe contained in each stratum. The overall objective was to select a sample of hospitals "generalizable" to the target universe, including hospitals outside the frame (which had a zero probability of selection). See *Design of the HCUP Nationwide Inpatient Sample, Release 4,* for more details on the design of the sample.

Sample weights were developed for the NIS to obtain national estimates of hospital and inpatient parameters. For example, with these weights it should be possible to estimate DRG-specific average lengths of stay over all U.S. hospitals, using weighted average lengths of stay based on averages or regression estimates from the NIS. Ideally, relationships among outcomes and their correlates estimated from the NIS should generally hold across all U.S. hospitals. However, since only 19 states contributed data to this fourth release, some estimates may be biased. In this report, we compare estimates based solely on the NIS against estimated quantities from other sources of data.

This report compares both discharge- and hospital-level statistics. Discharge statistics include discharge counts, inpatient charges, in-hospital mortality, and average lengths of stay. Hospital statistics include items such as number of beds, occupancy rates, and staffing levels.

This report is divided into four sections. The first section includes a discussion of the data sources used in the analysis. The second section explains the methodology used to compare the NIS and NHDS. The third section includes a presentation of the results: tables for this section are included at the end of the report. The final section offers some conclusions and recommendations for analyses of the NIS, Release 4.

DATA SOURCES

Benchmark statistics for 1995 from several data sources were compared. The NIS, Release 4, 1995 data were drawn from a frame of 19 states and includes approximately 6.7 million discharges from 938 hospitals. NIS statistics were mainly compared with those calculated from these two data sources:

1. *National Hospital Discharge Survey (NHDS), 1995*. Conducted by the National Center for Health Statistics, the NHDS includes about 260,000 discharges sampled from 400 hospitals. To be part of the NHDS, hospitals must have six or more beds staffed for patient use. The NHDS covers discharges from short-stay U.S. hospitals (hospitals with an average length of stay under 30 days), general-specialty (medical or surgical) hospitals, and children's hospitals. Federal, military, and Veterans Administration hospitals are excluded from the survey. The NHDS sampling frame includes very few specialty hospitals such as psychiatric, maternity, alcohol/chemical dependency, orthopedic, and head-injury hospitals.

   Statistics calculated from the NHDS do have sampling error. However, the statistics are assumed to be unbiased because the sampling frame is relatively unrestricted, encompassing all nonfederal, acute-care, general U.S. hospitals with six or more beds.

2. *AHA Annual Survey of Hospitals, 1995*. This hospital-level file contains one record for every hospital in the NIS universe, making it a convenient source for calculating various statistics based on both the population of hospitals and the NIS sample of hospitals. The file contains hospital-level statistics for hospital reporting periods, which do not necessarily correspond to the calendar year.

Table 3 summarizes some of the key differences in hospitals and discharges represented by the NIS and NHDS data files.

METHODS

Comparisons with NHDS

The following measures were chosen to compare the NIS and NHDS databases:

- Total number of discharges
- Average length of stay (ALOS)
- In-hospital mortality rate

These measures of utilization and outcomes were selected because they are typically used in health services research.

For each statistic, a test was performed to determine whether a difference was statistically significant between the NIS and NHDS estimates. Since the NHDS estimate was based on a sample, two-sample t-tests were used, as described in the Appendix. Differences were reported at the one and five percent

significance levels.

To assess their reliability, the statistics listed above were compared within the following types of strata:

- Geographic regions (Midwest, Northeast, West, and South)
- Hospital characteristics (ownership, rural location, teaching status, and bedsize)
- Patient characteristics (age, race, gender, and payer)
- Diagnosis groups (The principal diagnosis code for each discharge was assigned to a diagnosis group defined by the Clinical Classifications for Health Policy Research (CCHPR), Version 2 algorithm — see Elixhauser and McCarthy, 1996).
- Procedure groups (The principal procedure code for each discharge was assigned to a procedure group defined by the CCHPR, Version 2 algorithm — see Elixhauser and McCarthy, 1996).

Further, special analyses were conducted for hospitals in the South region, an area in which the NIS coverage is limited. In the NIS, Release 1, the South region was represented by only Florida. The Second Release of the NIS added Maryland and South Carolina. For Release 4 of the NIS, the South is represented by Florida, Maryland, South Carolina, and Tennessee.

All NIS statistics used sample weights and accounted for the sample design using the SUDAAN microcomputer statistical software to calculate finite sample statistics and their variances. All NHDS statistics were calculated with Statistical Analysis System (SAS) microcomputer software. For NHDS statistics, standard errors were calculated as described in the Appendix.

RESULTS

Comparisons Between the NIS and the NHDS

Since the NIS and the NHDS represent different samples of the same universe of hospitals, some differences are expected, and can be attributed to statistical "noise." Moreover, because of the large number of comparisons, some of the statistically significant differences will not be real differences using 0.05 level of significance. While bias could be present in either sample, the NHDS estimates are less likely to be biased because the hospital sampling frame is far less restricted than that for the NIS. The following sections describe results of statistical comparisons by region, hospital characteristics, patient characteristics, diagnosis, and procedure.

Comparisons by Region

Table 4 compares estimates of discharges, average lengths of stay, and in-hospital mortality generated from NIS and NHDS data. Comparisons are presented by total and by region for 1995. The NIS and NHDS estimates of national and regional discharges do not significantly differ. Overall, the NIS and NHDS produce similar estimates of average length of stay, although the NIS estimate is significantly higher than the NHDS estimate for the Midwest (by 30 percent). NIS in-hospital mortality rate estimates are also significantly higher in total (by 8 percent) for the Midwest and South (by 24 and 12 percent respectively).

Comparisons by Hospital Characteristics

Table 5 compares estimates of discharges, average lengths of stay, and in-hospital mortality between the NIS and NHDS for 1995, by hospital ownership categories (private/investor-owned, private/nonprofit, and government/nonfederal) and bedsize categories (6-99, 100-199, 200-299, 300-499, and 500+).

Several of the estimates for hospital discharges differ significantly between the two sources. For government hospitals, the NIS estimates 15 percent more discharges than the NHDS. For private hospitals, which represent the majority of the discharges, there is no significant difference in total discharges for either nonprofit or investor-owned hospitals. Within the ownership groups, significant differences are found for most bedsize categories except for 200-299 bed hospitals. The NIS estimates more discharges than the NHDS for five of the 10 significant differences, and fewer for the remaining five.

It should be noted that the total number of 1995 universe discharges in hospitals with over 500 beds is 6.6 million according to the AHA file. Consequently, the NIS (with 7.0 million) may provide a better estimate of discharge counts for large hospitals than the NHDS (with 3.9 million). These differences in estimated discharge counts may contribute to differences in outcome statistics, reported in Table 5, between the two sources because the discharge counts are essentially sums of discharge weights, which are used to calculate outcome statistics.

Totals for each ownership group show no significant differences in average length of stay (ALOS) or in-hospital mortality estimates. In addition, there are few differences within the ownership groups between the two sources: we note here one significant ALOS difference out of 15 comparisons. A significant ALOS difference between the NIS and NHDS for government hospitals is found only for 100-199 bed hospitals (19 percent higher).

Estimates for in-hospital mortality tend to be higher for the NIS than for NHDS, although not significantly in most cases. There are only four significant differences between the NIS and NHDS estimates although the NIS estimate is higher than the NHDS estimate for 12 of the 15 strata. The NIS estimate is significantly higher than the NHDS estimate for investor-owned hospitals with 100-199 beds (by 15 percent), and for nonprofit hospitals with fewer than 6-99 beds (31 percent) and between 100-199 beds (by 16 percent).

Comparisons by Patient Characteristics

Table 6 compares estimates of discharges, average lengths of stay, and in-hospital mortality between the NIS and NHDS for 1995 — by primary payer, age group, gender, and race. The NIS contains uniform values for race, however, there is variation in source data from the participating states. Specifically, in some states hospitals report "other" race for all non-white patients, resulting in overreporting for this race category. Any analysis of NIS data by race categories is affected by this variation. Except for mortality, the majority of estimates are not significantly different between the two data sources for these strata.

Discharge estimates for Medicare, Medicaid, private insurance, all age groups, males, females, and three categories of race (White, Black, and missing), show no significant differences between the NIS and NHDS. Significant differences however, are found for the payer categories of self-pay, no charge, other, and missing. The NIS discharge estimates for self-pay patients is 40 percent higher than the NHDS estimate. For no charge, other, and missing payer, the NIS estimates are lower than the NHDS estimates. The NIS estimate for other race is higher than the NHDS estimate by 158 percent.

Average length of stay estimates from the two sources are not statistically different. Estimates of in-hospital mortality rates from the NIS also tend to be higher than the NHDS estimates. Of the 17 strata, the NIS estimates are larger than the NHDS estimates for 11 strata, although not all differences are statistically significant. The NIS estimates are significantly larger than NHDS estimates for the payer category of other (36 percent); age groups 15-44 years, and 65+ years (17 and 4 percent); males and females (6 and 9 percent); plus the white, and missing race categories (12 and 18 percent). The NIS estimate is significantly smaller, by 16 and 24 percent respectively, than the NHDS estimate for the age group 0-15 years and other race strata.

Comparisons for the South Region

Table 7 gives a detailed comparison for the South Region by hospital and patient characteristics. Of the 21 strata in Table 7, significant differences are found between the NIS and NHDS estimates for discharges (8 out of 21) and in-hospital mortality rates (6 out of 21). None of the comparisons for average lengths of stay are statistically different.

No significant differences in discharge estimates are found for any ownership, age group, or gender category. Four of the five bedsize categories, however, show significant differences between the NIS and NHDS estimates of discharges. The NIS estimates are lower than the NHDS estimates for small and medium hospitals (6-99, 100-199, and 200-299 beds) by 9 to 28 percent. The NIS estimates for very large hospitals (500+ beds) are larger than the NHDS estimates by 53 percent. No significant differences are found for the primary payer categories of Medicare, Medicaid, and private insurance, while the categories of self-pay, no charge, other and missing do show significant differences. NIS discharge estimates are higher for the self-pay category and lower for the no charge, other, and missing

categories. These are similar to the discharge estimates over all regions by payer as found in Table 6.

The average length of stay estimates from the NIS generally agree with the NHDS estimates for the South. The NIS in-hospital mortality estimates are higher than the NHDS estimates for nearly every hospital and patient category, including by age group (17 of the 23 strata), although only six of the differences are significant. The higher NIS estimates may stem from the large impact of Florida hospitals on the estimate for the South. Florida accounts for 52% of Southern discharges and 51% of Southern hospitals within the 1995 NIS data. Because many of the Southern states are not represented in the NIS, discharges from Florida hospitals, and the characteristics of Florida's hospital and patient populations, may be amplified in NIS estimates. Specifically, Florida has a large immigrant population with serious health problems and this may explain some of the differences in mortality estimates.

Comparisons by Diagnosis Category

Table 8 compares the NIS and NHDS by the 25 most frequent primary diagnosis categories, ranked according to the NIS estimates of number of discharges for each category. CCHPR code categories (version 2) are assigned based on the primary (vs. principal or admitting) diagnosis. The NIS discharge estimates differ significantly from the NHDS estimates for 12 of the 25 CCHPR categories; NIS estimates are significantly higher for eight diagnosis categories and significantly lower for four categories.

Some of the discrepancies found in the estimated number of discharges may be explained by differences in the assignment of primary diagnosis for the NIS and NHDS databases. In building the NIS, there is no reordering of diagnoses. The first diagnosis listed for each discharge was assigned as the primary diagnosis (although the state organizations that supply NIS data may have assigned the principal diagnoses to the primary diagnosis position prior to supplying data for the NIS). The NHDS reordered diagnoses under certain conditions.

For example, differences in the number of delivery-related discharges could be explained by the reordering of diagnosis codes in the NHDS. For women discharged after a delivery, a code of V27 (Outcome of Delivery) from the supplemental classification is entered as the second-listed code. A code designating normal or abnormal delivery is then listed in the first position. This could explain differences in the number of discharges counted in the diagnosis group for normal pregnancy and/or delivery (rank 8), trauma to the perineum and vulva (rank 6), fetal distress and abnormal forces of labor (rank 18), other complications of birth affecting mother (rank 23), and other complications of pregnancy (rank 24).

As another example of diagnosis reordering in the NHDS, if the first-listed diagnosis was a symptom, it was reassigned as a secondary diagnosis. This may have affected estimates for the 13th ranked diagnosis category, nonspecific chest pain. Taking into account the differences in ordering of diagnoses reduces the number of significant differences in estimated discharges between the two data sources from 12 to six of the 25 categories.

Comparisons of ALOS and in-hospital mortality rates by diagnosis category (also shown in Table 8) indicate few significant differences between NIS and NHDS estimates. Significant differences are found for only one ALOS estimate (Normal Pregnancy) and for no in-hospital mortality estimates. The in-hospital mortality rates yielded valid significance tests for only 19 categories. This is due to the fact that valid NHDS standard errors for in-hospital mortality could not be calculated for six categories (see Appendix for validity criteria).

Comparisons by Procedure Category

Table 9 lists the top 25 procedure categories, ranked according to the NIS estimates of number of discharges for each category. Similar to the diagnosis groups, CCHPR codes are assigned based on the primary, or first-listed, procedure for each discharge. The NIS discharge estimates differ significantly from the NHDS estimates for nine of the 25 CCHPR categories; NIS estimates are significantly higher for seven procedure categories, and significantly lower for only two categories.

Procedures for which the NIS discharges were significantly higher than the NHDS estimates include the following: episiotomy, diagnostic cardiac catheterization, upper GI, percutaneous coronary angioplasty, respiratory intubation, CT head scans, and cancer chemotherapy. These differences may be explained by the estimated high number of discharges from large hospitals in the NIS, which are more likely to perform high technology procedures (see Table 5), compared to the number of large hospitals in NHDS.

Comparisons of average length of stay and in-hospital mortality rate estimates by procedure category show few significant differences between NIS and NHDS estimates. Three significant differences are found for ALOS, and three differences are also found for in-hospital mortality. Significance tests were not performed for five in-hospital mortality rate estimates due to the unavailability of valid standard errors for NHDS estimates (see Appendix).

Comparison with AHA Data

Table 10 demonstrates that hospital weights associated with the NIS yield hospital counts consistent with AHA universe counts for various categories of hospital types. This is expected because the sample of NIS hospitals was stratified on most of these variables, and sample hospital weights were calculated within strata based on AHA data.

Table 11 compares the universe (AHA) and weighted frame (NIS) means and medians for selected hospital-level measures defined in the 1995 AHA Annual Survey. In general, the frame hospital weighted averages and medians tend to be slightly higher than the universe averages.

DISCUSSION

In general, for many types of estimates, the NIS performs very well. Some differences emerge when the NIS is compared to specific data sets. Sometimes, these variations are caused by differences in definitions (e.g., NIS and NHDS coding schemes). In some cases, differences are due to certain shortcomings in the NIS.

Comparisons of Total Population Estimates

Based on comparisons between statistics calculated from the NIS and the NHDS, it appears that most

statistics calculated from the two data sources are similar. Overall, when compared with the NHDS, the NIS seems to estimate higher discharges for certain types of hospitals (government hospitals and large hospitals) and higher in-hospital mortality rates. The higher mortality estimates may be in part because the NIS tends to have higher estimates of discharges for "large" hospitals, and these patients may represent a somewhat different severity of illness than those in other hospitals.

Estimates of LOS and mortality by diagnosis and procedure groups show few significant differences. However, several estimates of discharges by diagnosis and procedure groups are significantly different. These differences of LOS and mortality could be attributable to differences in data handling — the NIS takes all diagnosis and procedure codes as they are recorded, while the NHDS has specific rules for what is considered a valid first-listed diagnosis.

Conclusion

In summary, the NIS estimates of ALOS appear to be unbiased in most contexts. The NIS estimates of discharge counts differ under some conditions from the NHDS estimates but not in any consistent direction. The NIS estimates for in-hospital mortality are higher than estimates from the NHDS for the Midwest and South. Based on comparisons with AHA data, NIS hospitals tend, on average, to be larger than the universe of community hospitals. This higher percentage of weighted NIS discharges coming from "large" hospitals — and the more complex case mix of those hospitals — may contribute to the higher in-hospital mortality estimates when compared to the NHDS.

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1. Gesler, Wilbert M. and Thomas C. Ricketts. *Health in Rural North America.* New Brunswick: Rutgers University Press, 1992.

2. Elixhauser, A. and McCarthy, E. *Clinical Classifications for Health Policy Research, Version 2: Hospital Inpatient Statistics.* (AHCPR Publication No. 96-0017) Agency for Health Care Policy and Research, Healthcare Cost and Utilization Project (HCUP) Research Note 1. February, 1996.

APPENDIX

Estimates of Standard Error for NHDS Statistics

A variety of statistics were estimated based on these data: 1) total number of discharges, 2) in-hospital mortality, and 3) average length of stay (calculated as the difference between discharge and admission dates). The standard errors were calculated as follows.

Total Numbers of Discharges

From the NHDS documentation, constants a and b were obtained for 1995. The standard error for the estimate of total discharges is:

$$SE_{TD} = \left(aW_{TD}^2 + bW_{TD}\right)^{1/2}$$

where W_{TD} is the weighted sum of total discharges (i.e., the estimate of total discharges).

This estimate of standard error is valid only if:

(1) estimated total discharges exceeds 366,657 or

(2) estimated total discharges exceeds 60,769 and estimated total days exceeds 283,338.

Percent Mortality

Let P be the estimated proportion of in-hospital deaths. The standard error of this proportion expressed as a percent is:

$$SE_P = 100\left(\frac{c\,P\,(1 - P)}{W}\right)^{1/2}$$

Where the constant c is given by NHDS documentation. This estimate of the standard error is valid only if:

(1) estimated total discharges exceeds 366,657 and the estimated number of deaths exceeds zero, or

(2) both estimated total discharges and estimated total deaths exceed 60,769.

Average Length of Stay

Let ALOS be the estimated average length of stay based on a weighted number of discharges equal to TD. If the weighted sum of patient length of stay is TLOS, and

$$ALOS = \frac{TLOS}{TD}$$

then the estimated standard error is:

$$SE_{ALOS} = ALOS \left[\left(a_1 + \frac{b_1}{TD} \right) + \left(a_2 + \frac{b_2}{TLOS} \right) \right]^{1/2}.$$

Constants a_1, a_2, b_1, and b_2 were obtained from the NHDS documentation concerning standard error calculations for average length of stay.

Tests of Statistical Significance

To test for a statistically significant difference between an NIS estimate, X, and an NHDS estimate, Y, the following procedure was used. The difference is significant if

$$absolute\ value \left(\frac{X - Y}{\sqrt{SE_X^2 + SE_Y^2}} \right) \geq S$$

where SE_X is the estimated standard error for the NIS estimate and SE_Y is the estimated standard error of the NHDS estimate. S is equal to 1.96 for significance at the .05 level and S is equal to 2.576 for significance at the .01 level.

If a valid estimate of either standard error, SE_X or SE_Y, could not be obtained, then a significance test was not performed.

Table 3. Differences Between NIS – Release 4 and NHDS Files Used in This Analysis

CHARACTERISTIC	DATABASE	
	NIS – Release 4	**NHDS**
Intended Universe	Discharges from community hospitals as defined by the AHA - nonfederal, short-term general, or other special hospitals that are not a hospital unit of an institution.	Discharges from short-stay hospitals (hospitals with an average length of stay of less than 30 days), general-specialty (medical or surgical) hospitals, or children's hospitals. The NHDS does not include federal, military, and Veterans Administration hospitals, nor does it include hospital units of institutions (i.e., prison hospitals).
- **Specialty hospitals and units**	AHA community hospitals may be specialty hospitals. Some AHA community hospitals include specialty units - obstetrics/ gynecology; short-term rehabilitation; and ear, nose, and throat.	Includes discharges from a few specialty hospitals (i.e., psychiatric, maternity, alcohol/chemical dependency, orthopedic, and head injury rehabilitation hospitals).
- ***HMO enrollees***	Included	Included
- ***Bedsize***	No restriction on bedsize.	Must have at least six beds staffed for patient use.
Sample or Universe	Sample	Sample
Sampling Frame	19 states	50 states and the District of Columbia
Sample Design	By geographic region, control/ownership, location, teaching status, and bedsize (bedsize categories are specific to the hospital's location and teaching status). 938 hospitals.	Includes all hospitals with at least 1,000 beds or more than 40,000 discharges annually - plus an additional sample of hospitals based on a stratified three-stage design. Approximately 490 hospitals.
Discharges included in database	All discharges from sampled hospitals: approximately 6.7 million.	A sample of discharges from sampled hospitals: approximately 260,000 discharges.
Charges	Reported charges missing for some HMO enrollees.	Not reported

CHARACTERISTIC	DATABASE	
	NIS – Release 4	**NHDS**
Reassignment of diagnosis codes	None	Myocardial infarctions are reassigned to the principal diagnosis when other circulatory diagnoses are present. For women discharged after a delivery, a code of V27 (Outcome of Delivery) from the supplemental classification is entered as the second-listed code, with a code designating normal or abnormal delivery in the first-listed position. If the first-listed diagnosis was a symptom, it was reassigned as a secondary diagnosis.

Table 4. NIS and NHDS Comparisons by Region, 1995

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	**NHDS**	**NIS**	**NHDS**	**NIS**	**NHDS**
U.S.	34,792 (461)	34,101 (1,092)	5.28 (.05)	5.05 (.27)	2.58 ** (.03)	2.39 (.06)
Census Region						
Midwest	7,492 (226)	7,743 (603)	6.39 * (.13)	4.92 (.63)	2.90 ** (.06)	2.34 (.10)
Northeast	8,296 (201)	7,689 (423)	5.07 (.06)	5.94 (.52)	2.41 (.04)	2.59 (.09)
South	12,260 (290)	12,542 (629)	5.12 (.05)	5.01 (.40)	2.74 ** (.04)	2.44 (.10)
West	6,344 (191)	6,128 (442)	4.60 (.20)	4.21 (.50)	2.13 (.08)	2.10 (.12)

* Difference is significant at the 0.05 level.

** Difference is significant at the 0.01 level.

Table 5. NIS and NHDS Comparisons by Hospital Characteristics, 1995

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	NHDS	NIS	NHDS	NIS	NHDS
Control/Bedsize						
Private/ Investor-owned						
Total	3,689	3,631	4.94	5.04	2.70	2.53
	(107)	(124)	(.14)	(.28)	(.12)	(.18)
6 - 99 beds	634 **	831	4.91	4.53	2.49	2.80
	(33)	(34)	(.21)	(.29)	(.12)	(.30)
100 - 199 beds	1,544 **	1,172	4.80	5.06	2.78 *	2.41
	(51)	(45)	(.12)	(.30)	(.10)	(.52)
200 - 299 beds	1,055	893	4.90	5.48	2.53	2.18
	(108)	(36)	(.41)	(.34)	(.36)	(.64)
300 - 499 beds	381 **	735	5.34	5.04	3.00	2.56
	(129)	(31)	(.28)	(.32)	(.14)	(.35)
500+ beds	75 [a]	-	6.50 [a]	-	3.38 [a]	-
	(60)	(b)	(0.0)	(b)	(0.0)	(b)
Private/Nonprofit						
Total	26,091	26,132	5.25	5.06	2.58 **	2.38
	(436)	(839)	(.05)	(.27)	(.03)	(.07)
6 - 99 beds	2,483 **	4,324	4.41	4.73	2.74 **	2.09
	(92)	(146)	(.11)	(.26)	(.07)	(.16)
100 - 199 beds	5,039 **	6,301	5.08	4.65	2.57 *	2.21
	(184)	(209)	(.10)	(.25)	(.06)	(.14)
200 - 299 beds	5,091	5,281	5.18	5.06	2.55	2.52
	(340)	(176)	(.10)	(.27)	(.07)	(.16)
300 - 499 beds	8,026	7,184	5.12	5.30	2.50	2.53
	(425)	(237)	(.08)	(.28)	(.05)	(.14)
500+ beds	5,452 **	3,042	6.06	5.76	2.65	2.50
	(383)	(105)	(.15)	(.32)	(.07)	(.21)

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	NHDS	NIS	NHDS	NIS	NHDS
Government/ Nonfederal						
Total	5,011 **	4,338	5.70	5.04	2.54	2.53
	(199)	(146)	(.24)	(.27)	(.05)	(.18)
6 - 99 beds	1,320 **	1,645	5.71	3.98	2.62	2.80
	(52)	(60)	(.86)	(.23)	(.09)	(.30)
100 - 199 beds	919 **	470	4.93 *	4.15	2.43	2.41
	(61)	(22)	(.15)	(.30)	(.10)	(.52)
200 - 299 beds	425	286	4.31	4.96	1.96	2.18
	(95)	(15)	(.27)	(.39)	(.20)	(.64)
300 - 499 beds	872 *	1,118	5.98	5.93	2.60	2.56
	(88)	(43)	(.22)	(.35)	(.14)	(.35)
500+ beds	1,477 **	818	6.42	6.49	2.66	2.13
	(186)	(34)	(.19)	(.40)	(.12)	(.37)

[a] A significance test was not performed because a valid standard error was not available.

[b] The NHDS sample size was too small to calculate a valid estimate of standard error.

* Difference is significant at the 0.05 level.

** Difference is significant at the 0.01 level.

Table 6. NIS and NHDS Comparisons by Patient Characteristics, 1995

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	NHDS	NIS	NHDS	NIS	NHDS
Primary Payer						
Medicare	12,500	11,547	7.15	6.91	5.10	4.81
	(188)	(698)	(.09)	(.50)	(.04)	(.28)
Medicaid	6,452	5,588	4.80	4.53	1.09	.98
	(205)	(1186)	(.12)	(1.02)	(.04)	(.11)
Private Insurance	12,618	11,486	3.86	3.80	1.13	1.14
	(265)	(574)	(.03)	(.31)	(.02)	(.08)
Self-pay	1,799 *	1,281	4.44	4.38	1.62	1.50
	(109)	(193)	(.14)	(.93)	(.04)	(.22)
No charge	50 **	809	5.00	4.57	1.32	1.88
	(9)	(122)	(.48)	(.98)	(.19)	(.30)
Other	1,180 **	2,786	4.70	4.12	1.46 **	1.07
	(63)	(418)	(.11)	(.87)	(.08)	(.12)
Missing	194 *	604	5.30	4.73	1.05	1.44
	(38)	(172)	(.94)	(1.67)	(.15)	(.20)
Age Group						
Under 15 years	5,853	5,995	3.49	3.42	.41 **	.49
	(162)	(801)	(.08)	(1.05)	(.02)	(.02)
15 - 44 years	10,439	10,513	3.88	3.81	.61 **	.52
	(185)	(1,028)	(.06)	(.70)	(.02)	(.02)
45 - 64 years	5,915	6,108	5.67	5.52	2.27	2.28
	(88)	(695)	(.05)	(1.14)	(.03)	(.04)
65 years and over	12,584	11,484	7.09	6.80	5.38 **	5.15
	(188)	(1,231)	(.09)	(1.18)	(.04)	(.03)
Gender						
Male	14,441	13,970	5.68	5.42	3.13 *	2.94
	(185)	(936)	(.08)	(.53)	(.03)	(.07)
Female	20,345	20,131	5.00	4.80	2.20 *	2.01
	(292)	(640)	(.04)	(.26)	(.03)	(.07)
Race						
White	20,549	21,848	5.44	5.11	2.86 **	2.56
	(489)	(1,066)	(.06)	(.40)	(.03)	(.10)
Black	4,169	4,313	5.98	5.58	2.36	2.23
	(186)	(327)	(.12)	(.68)	(.04)	(.12)

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	**NHDS**	**NIS**	**NHDS**	**NIS**	**NHDS**
Other	3,426 **	1,328	4.43	4.78	1.64 *	2.16
	(234)	(227)	(.13)	(1.34)	(.09)	(.21)
Missing	6,648	6,612	4.80	4.58	2.35 **	1.99
	(404)	(855)	(.07)	(.92)	(.05)	(.11)

* Difference is significant at the 0.05 level.

** Difference is significant at the 0.01 level.

Table 7. NIS and NHDS Comparisons by Hospital Characteristics and Patient Characteristics for South Region, 1995

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	NHDS	NIS	NHDS	NIS	NHDS
Control/Ownership						
Private/	2,526	2,522	4.89	4.96	2.89	2.51
Investor-owned	(81)	(88)	(.09)	(.28)	(.07)	(.23)
Private/Nonprofit	7,435	7,362	4.98	4.94	2.68	2.42
	(231)	(242)	(.06)	(.28)	(.05)	(.13)
Government/	2,699	2,658	5.71	5.23	2.76	2.41
Nonfederal	(161)	(93)	(.16)	(.29)	(.08)	(.22)
Bedsize						
6 - 99 beds	1,715 **	2,390	4.89	4.31	2.92	2.75
	(52)	(84)	(.20)	(.24)	(.07)	(.25)
100 - 199 beds	2,863 *	3,156	4.84	4.69	2.81 **	2.09
	(80)	(109)	(.07)	(.26)	(.06)	(.19)
200 - 299 beds	1,936 *	2,347	4.89	5.06	2.66	2.41
	(173)	(83)	(.12)	(.29)	(.09)	(.23)
300 - 499 beds	3,128	2,681	5.04	5.37	2.73	2.55
	(252)	(93)	(.07)	(.30)	(.07)	(.23)
500+ beds	3,020 **	1,968	5.73	5.80	2.64	2.48
	(330)	(71)	(.14)	(.33)	(.10)	(.26)
Primary Payer						
Medicare	4,778	4,485	6.65	6.78	5.12	4.82
	(112)	(281)	(.05)	(.52)	(.05)	(.45)
Medicaid	2,202	2,191	4.78	4.11	1.13	.92
	(75)	(466)	(.17)	(.93)	(.03)	(.16)
Private Insurance	4,359	4,088	3.80	3.84	1.24	1.11
	(139)	(209)	(.05)	(.32)	(.04)	(.13)
Self-pay	902 **	172	4.42	4.35	1.72	1.81
	(102)	(27)	(.18)	(.98)	(.06)	(.65)
No charge	1 **	357	5.14	4.61	.88	1.53
	(0)	(55)	(1.09)	(1.01)	(.47)	(.41)
Other	407 **	958	4.68	4.11	1.99 **	1.01
	(20)	(145)	(.10)	(.88)	(.13)	(.21)

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	**NHDS**	**NIS**	**NHDS**	**NIS**	**NHDS**
Missing	10 **	292	3.88	4.51	1.40	1.95
	(2)	(83)	(.31)	(1.59)	(.19)	(.34)

	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
	NIS	NHDS	NIS	NHDS	NIS	NHDS
Age Group						
Under 15 years	2,042	2,096	4.03	3.42	.45	.51
	(85)	(280)	(.18)	(1.05)	(.02)	(.04)
15 - 44 years	3,630	3,924	3.81	3.70	.75 **	.58
	(116)	(384)	(.07)	(.68)	(.04)	(.04)
45 - 64 years	2,262	2,355	5.39	5.49	2.35	2.23
	(56)	(268)	(.06)	(1.13)	(.03)	(.06)
65 years and over	4,726	4,167	6.46	6.75	5.45 *	5.27
	(111)	(447)	(.05)	(1.17)	(.06)	(.06)
Gender						
Male	5,316	5,068	5.42	5.32	3.34 **	3.01
	(124)	(340)	(.06)	(.53)	(.04)	(.11)
Female	7,341	7,474	4.90	4.79	2.30 *	2.05
	(173)	(242)	(.06)	(.26)	(.04)	(.11)

* Difference is significant at the 0.05 level.

** Difference is significant at the 0.01 level.

Table 8. NIS and NHDS Comparisons by Primary Diagnoses Ranked by NIS Data, 1995

Rank[1]	CCHPR Category[2]	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
		NIS	NHDS	NIS	NHDS	NIS	NHDS
1	218: Liveborn	3,843 (114)	3,621 (123)	2.78 (.05)	2.78 (.16)	.34 (.01)	.38 (.08)
2	101: Coronary atherosclerosis	1,387 (45)	1,303 (49)	4.72 (.11)	4.42 (.26)	.97 (.02)	.95 (.20)
3	122: Pneumonia (except that caused by tuberculosis and sexually transmitted diseases)	1,268 (18)	1,261 (48)	6.89 (.06)	6.75 (.40)	6.39 (.10)	5.97 (.49)
4	108: Congestive heart failure, nonhypertensive	942 (15)	880 (36)	6.95 (.31)	6.35 (.39)	5.62 (.06)	4.69 (.53)
5	100: Acute myocardial infarction	720 (17)	766 (32)	6.52 (.06)	6.61 (.41)	9.49 (.11)	9.93 (.80)
6	193: Trauma to perineum and vulva	657 ** (20)	2 (1)	1.56 [a] (.02)	1.47 (b)	0.0 [a] (0.0)	0.0 (b)
7	109: Acute cerebrovascular disease	622 * (9)	554 (25)	8.58 (.14)	8.38 (.55)	11.28 (.14)	11.65 (1.01)
8	196: Normal pregnancy and/or delivery	611 ** (21)	3,763 (128)	1.53 ** (.01)	2.12 (.12)	0.0 (0.0)	.02 (.02)
9	69: Affective disorders	557 (23)	621 (27)	10.38 (.26)	9.79 (.62)	.10 (.02)	.06 (.07)
10	106: Cardiac dysrhythmias	554 (10)	559 (25)	4.14 (.05)	4.10 (.28)	1.26 (.03)	1.11 (.33)
11	127: Chronic obstructive pulmonary disease and bronchiectasis	516 (8)	553 (25`)	6.43 (.10)	6.15 (.41)	3.18 (.07)	3.28 (.56)
12	205: Spondylosis and back problems	507 (15)	515 (23)	3.74 (.06)	3.78 (.27)	.18 (.01)	.28 (.17)
13	102: Nonspecific chest pain	501 ** (11)	73 (7)	2.16 [a] (.02)	1.54 (b)	.08 [a] (.01)	.53 (b)
14	149: Biliary tract disease	494 (8)	509 (23)	4.86 (.04)	4.33 (.30)	.81 (.03)	.61 (.26)
15	55: Fluid and electrolyte disorders	481 ** (10)	571 (25)	4.87 (.06)	4.71 (.32)	3.41 (.10)	3.52 (.57)

Rank[1]	CCHPR Category[2]	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error)	
		NIS	NHDS	NIS	NHDS	NIS	NHDS
16	237: Complication of device, implant or graft	459 (14)	412 (20)	6.56 (.10)	6.21 (.44)	1.99 (.04)	1.25 (.40)
17	128: Asthma	443 * (13)	506 (23)	3.84 (.04)	3.71 (.26)	.43 (.02)	.23 (.16)
18	190: Fetal distress and abnormal forces of labor	422 ** (20)	4 (2)	2.36 [a] (.04)	1.37 (b)	0.0 [a] (0.0)	0.0 (b)
19	50: Diabetes mellitus with complications	410 (9)	407 (20)	6.68 (.16)	6.59 (.46)	1.71 (.05)	2.23 (.54)
20	159: Urinary tract infections	400 * (7)	444 (21)	5.50	5.50 (.39)	1.84 (.05)	2.59 (.56)
21	203: Osteoarthritis	385 (11)	354 (18)	5.85 (.10)	5.98 (.44)	.24 [a] (.01)	.05 (b)
22	2: Septicemia (except labor)	378 ** (7)	308 (16)	8.81 (.09)	8.69 (.64)	14.07 (.17)	14.81 (1.50)
23	195: Other complications of birth, puerperium affecting management of the mother	370 ** (12)	52 (6)	2.12 [a] (.04)	2.52 (b)	.03 [a] (.01)	0.0 (b)
24	181: Other complications of pregnancy	352 ** (12)	161 (11)	2.32 (.04)	2.68 (.29)	.03 [a] (.01)	0.0 (b)
25	45: Maintenance chemotherapy, radiotherapy	291 ** (14)	112 (9)	3.83 (.08)	3.89 (.44)	.71 (.04)	.60 (.54)

[1] NIS rank is based on number of discharges.

[2] Diagnoses classified according to *Clinical Classifications for Health Policy Research, Version 2* (see Elixhauser and McCarthy, 1996)

[a] A significance test was not performed because a valid standard error was not available.

[b] The NHDS sample size was too small to calculate a valid estimate of standard error.

* Difference is significant at the 0.05 level.

** Difference is significant at the 0.01 level.

Table 9.
NIS and NHDS Comparisons by Primary Procedures Ranked by NIS Data, 1995

Rank [1]	CCHPR Category[2]	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error	
		NIS	NHDS	NIS	NHDS	NIS	NHDS
1	115: Circumcision	1,060 (31)	1,150 (44)	2.21 (.02)	2.17 (.14)	.01 [a] (0.0)	0.0 (b)
2	137: Other procedures to assist delivery	1,040 (45)	933 (37)	1.70 (.02)	1.75 (.12)	.01 (0.0)	.02 (.03)
3	134: Cesarean section	800 (40)	769 (32)	3.61 (.02)	3.60 (.24)	.02 (0.0)	.05 (.06)
4	133: Episiotomy	781 ** (35)	483 (22)	1.68 (.02)	1.62 (.13)	0.0 [a] (0.0)	0.0 (b)
5	47: Diagnostic cardiac catheterization, coronary arteriography	628 ** (22)	523 (24)	4.35 (.02)	3.95 (.28)	1.14 (.03)	.78 (.28)
6	70: Upper gastrointestinal endoscopy, biopsy	608 ** (9)	530 (24)	6.51 ** (.07)	5.30 (.36)	2.46 (.04)	1.81 (.43)
7	124: Hysterectomy, abdominal and vaginal	545 (13)	557 (25)	3.37 (.02)	3.39 (.24)	.12 (.01)	.11 (.10)
8	140: Repair of current obstetric laceration	512 * (20)	591 (26)	1.62 (.02)	1.65 (.13)	0.0 [a] (0.0)	0.0 (b)
9	45: Percutaneous transluminal coronary angioplasty (PTCA)	460 * (29)	383 (19)	4.31 (.05)	4.33 (.32)	1.11 (.05)	.93 (.36)
10	216: Respiratory intubation and mechanical ventilation	442 ** (9)	278 (15)	11.59 ** (.23)	8.56 (.65)	31.45 * (.41)	27.40 (1.98)
11	84: Cholecystectomy and common duct exploration	413 (8)	419 (20)	5.32 (.06)	4.73 (.34)	.84 (.03)	.42 (.23)
12	219: Alcohol and drug rehabilitation/detoxification	407 (31)	361 (18)	6.46 (.24)	7.16 (.51)	.09 [a] (.01)	0.0 (b)
13	231: Other therapeutic procedures	404 (40)	411 (20)	5.89 (.12)	5.53 (.39)	2.67 (.18)	2.63 (.58)
14	135: Forceps, vacuum, and breech delivery	393 (15)	398 (19)	1.84 (.02)	1.96 (.17)	.01 (0.0)	.01 (.04)
15	3: Laminectomy, excision intervertebral disc	357 (13)	318 (17)	3.58 (.06)	3.53 (.06)	.20 (.01)	.21 (.19)

Rank [1]	CCHPR Category[2]	Number of Discharges in Thousands (Standard Error)		Average Length of Stay in Days (Standard Error)		In-Hospital Mortality Rate: Percent (Standard Error	
		NIS	NHDS	NIS	NHDS	NIS	NHDS
16	44: Coronary artery bypass graft (CABG)	353 (21)	329 (17)	10.07 (.14)	9.58 (.69)	3.21 (.08)	2.20 (.60)
17	177: Computerized axial tomography (CT) scan head	314 * (19)	267 (15)	6.17 (.16)	5.70 (.45)	4.59 (.13)	4.11 (.90)
18	152: Arthroplasty knee	293 (8)	275 (15)	5.10 (.05)	4.97 (.40)	.21 [a] (.01)	.08 (b)
19	224: Cancer chemotherapy	285 * (14)	238 (14)	4.36 (.10)	3.98 (.34)	1.27 * (.06)	.47 (.33)
20	4: Diagnostic spinal tap	279 (9)	255 (14)	6.15 ** (.08)	5.01 (.41)	2.28 (.08)	1.57 (.58)
21	153: Hip replacement, total and partial	279 (7)	254 (14)	6.92 (.08)	7.11 (.56)	1.50 (.05)	1.61 (.58)
22	146: Treatment, fracture or dislocation of hip and femur	273 (4)	253 (14)	7.68 (.08)	7.56 (.59)	2.25 (.06)	2.89 (.78)
23	193: Diagnostic ultrasound of heart (echocardiogram)	247 (15)	236 (14)	5.71 (.10)	5.62 (.46)	2.27 (.09)	1.60 (.60)
24	76: Colonoscopy & biopsy	239 (4)	223 (13)	6.78 (.06)	6.15 (.51)	1.63 (.05)	.89 (.47)
25	217: Other respiratory therapy	192 ** (18)	264 (15)	4.78 (.14)	4.22 (.35)	3.47 * (.22)	1.86 (.61)

[1] NIS rank is based on number of discharges.

[2] Diagnoses classified according to *Clinical Classifications for Health Policy Research, Version 2* (see Elixhauser and McCarthy, 1996)

[a] A significance test was not performed because a valid standard error was not available.

[b] The NHDS sample size was too small to calculate a valid estimate of standard error.

* Difference is significant at the 0.05 level.

** Difference is significant at the 0.01 level.

Table 10. Number of Hospitals in NIS Frame and AHA Universe by Hospital Characteristics, 1995

	1995 AHA Universe	1995 Frame[1] Weighted	1995 Frame[1] Unweighted
U.S.	5,260	5,260	938
Census Region			
Midwest	1,507	1,507	479
Northeast	772	772	162
South	2,004	2,004	278
West	977	977	181
Control/Ownership			
Private/ investor-owned	785	772	145
Private/nonprofit	3,112	3,163	587
Government/ nonfederal	1,363	1,325	206
Location/Teaching Status			
Rural			
Total	2,257	2,257	367
1 - 49 beds	1,276	1,276	201
50 - 99 beds	570	570	97
100+ beds	411	411	69
Urban			
Total	3,003	3,003	571
Teaching			
Total	647	647	129
1 - 49 beds	258	258	50
50 - 99 beds	224	224	46
100+ beds	165	165	33
Non-teaching			
Total	2,356	2,356	442
1 - 49 beds	822	822	142
50 - 99 beds	780	780	160
100+ beds	754	754	140

Note: Significance tests were not performed because these are not sample statistics.

[1] The 1995 frame contains 19 states.

Table 11.
NIS 19-State Sampling Frame and AHA Universe Comparisons, 1995

	Universe Mean	Frame Weighted Mean	Universe Median	Frame Weighted Median
Hospital Admissions	5852.29	6946.03	3250.00	4448.00
Hospital Discharges	5852.29	6946.03	3250.00	4448.00
Hospital Discharges[1]	6644.03	7887.94	3657.00	4986.00
Hospital Beds	151.73	175.47	96.00	122.0
Hospital Average Length of Stay	6.24	5.93	5.06	5.13
Hospital Occupancy	0.50	0.54	0.51	0.55
Total Hospital Expenses (in dollars)	54,145,873	66,091,226	24,687,389	34,682,636
Hospital Expenses per Bed (in dollars)	298,128	336,030	272,915	309,801
Total Hospital Payroll (in dollars)	23,418,937	28,558,285	10,322,839	15,011,000
Hospital Payroll per Bed (in dollars)	126,631	142,412	115,515	129,805
% Medicare Days	53.39	52.84	53.78	53.26
% Medicare Discharges	45.03	44.31	45.11	44.17
% Medicare Discharges[1]	40.71	40.04	40.17	39.57
% Medicaid Days	14.16	13.41	11.98	11.25
% Medicaid Discharges	15.94	14.95	14.67	13.72
% Medicaid Discharges[1]	14.13	13.18	13.02	12.19
FTE[2]	711.76	845.62	363.50	469.50
FTE[2]/Bed	4.26	4.54	3.98	4.20

Note: Significance tests were not performed because these are not sample statistics.

[1] Adjusted for well newborns.

[2] Full-time equivalents.