

STATISTICAL BRIEF #7

May 2006

Uninsured Hospitalizations, 2003

Anne Elixhauser, Ph.D. and C. Allison Russo, M.P.H.

Introduction

The number of uninsured in the United States is considerable, with about 48 million persons lacking health insurance.* While some use of health care services is discretionary, when faced with a serious or life-threatening condition, hospitalization may be the only option. The resulting health and financial burden of payment on the uninsured and the potential loss of revenues to hospitals can be substantial. In 2003, there were 1.7 million uninsured hospitalizations resulting in a national bill of \$29 billion.

This Statistical Brief presents data from the Healthcare Cost and Utilization Project (HCUP) on uninsured hospital stays. Hospital utilization is described for those stays classified as uninsured because no third-party payer was identified. Comparisons are made between uninsured hospital stays and those covered by private insurance and Medicaid. All differences between estimates noted in the text are statistically significant at the 0.05 level or better.

Findings

Even though about 16.6 percent of the U.S. population was uninsured in 2003,* only 4.5 percent of hospital stays were uninsured. In 2003, 1.7 million uninsured hospitalizations resulted in a national bill of \$29 billion.

General characteristics of uninsured hospital stays

Table 1 displays the characteristics of uninsured hospital stays compared with stays covered by private insurance, Medicaid, and all hospitalized patients. Although 18–44 year olds comprise 26.3 percent of hospital stays overall, a little over half of hospital patients who were uninsured are in this age range, compared with about one-third of privately insured patients and those covered by Medicaid. Overall, males account for 40.6 percent of U.S. hospital stays, but they make up 51.6 percent of uninsured stays.

The mean length of stay for uninsured hospitalizations was significantly shorter than for Medicaid—3.8 days, compared with 4.6 for

Highlights

- Although about 16.6 percent of the U.S. population was uninsured in 2003,* only 4.5 percent of all hospitalizations (1.7 million hospital stays) were uninsured.
- Half of all uninsured inpatients were between 18 and 44 years of age, compared with one-third of the privately insured and individuals covered by Medicaid. Half of uninsured stays were for males, compared to just over a third for Medicaid and privately insured stays.
- The mean length of stay for uninsured hospitalizations was 3.8 days, compared to 4.6 days for Medicaid.
- Nearly 60 percent of uninsured hospital stays originated in the emergency department, compared with 31.8 percent for the privately insured and 39.3 percent for stays billed to Medicaid.
- About 3.5 percent of uninsured hospital stays resulted in discharge against medical advice. This figure is three times higher than for Medicaid stays and seven times higher than for privately insured stays.
- Hospitalizations in the South were more likely to be uninsured than in any other region. There were 81.2 uninsured hospitalizations per 10,000 people in the South—a figure 35 percent higher than the Northeast, 65 percent higher than the Midwest, and nearly 140 percent higher than the West.

* Rhoades, J. A. *The Uninsured in America, 2003: Estimates for the U.S. Population under Age 65. Statistical Brief #41.* June 2004. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.meps.ahrq.gov/papers/st41/stat41.htm>

Medicaid—and was almost identical to the length of stay for privately insured stays (3.7 days). Mean charges for uninsured stays, privately insured, and Medicaid-covered stays were virtually identical.

Admission source and discharge status for uninsured stays

As shown in figure 1, nearly 60 percent of hospital stays for the uninsured originated in the emergency department—nearly double the percentage for privately insured patients and 50 percent more than for stays billed to Medicaid.

Figure 2 depicts discharge status for uninsured hospital stays compared with stays billed to Medicaid and private payers. Only 2.2 percent of uninsured stays ended in discharge to home health care, as compared with 4.9 percent for the privately insured and 5.2 percent of Medicaid stays. (The overall value of 7.3 percent includes patients covered by Medicare.) About 3.5 percent of uninsured hospital stays ended in discharge against medical advice, which was nearly three times higher than for Medicaid and seven times higher than for stays billed to private insurers.

Differences in uninsured hospital stays, by region

Relative to the populations in each region, there were significant differences in the number of uninsured hospital stays within each region (table 2). In 2003, 38.1 percent of all hospital stays occurred in the South; however, the South accounted for nearly half of all uninsured hospitalizations. Some of this discrepancy can be accounted for by the higher percentage of the population in the South that is uninsured (19.8 percent), as compared with the Northeast (11.6 percent) and the Midwest (13.8 percent). However, the West has a comparable percentage of population that is uninsured (19.2 percent), and it accounts for 19.1 percent of all hospital stays—yet only 13.2 percent of all uninsured stays occur in the West. The Northeast and Midwest each accounted for about 19 percent of uninsured hospital stays.

Because populations vary by region, table 2 also presents the hospitalization rate per 10,000 people in each region. This table demonstrates that although the overall hospitalization rate was relatively similar in the Northeast, Midwest, and South (about 1,400 hospital stays per 10,000 people in each region), hospitalizations in the South were more likely to be uninsured. There were 81.2 uninsured hospitalizations per 10,000 people in the South, a figure 35 percent higher than the Northeast, 65 percent higher than the Midwest, and 137 percent higher than the West. The West had the lowest overall rate of hospitalizations, with just under 1,100 hospital stays per 10,000, and only 34.2 uninsured hospitalizations per 10,000 people.

Data Source

The estimates in this Statistical Brief are based upon data from the HCUP 2003 Nationwide Inpatient Sample (NIS).

Data on regional population estimates were obtained from Table 8: Annual Estimates of the Population for the United States, Regions, and Divisions: April 1, 2000 to July 1, 2005 (NST-EST2005-08), Population Division, U.S. Census Bureau, release date: December 22, 2005. <http://www.census.gov/popest/states/tables/NST-EST2005-08.xls>

Data on the uninsured for 2003 were obtained from Rhoades, J. A. *The Uninsured in America, 2003: Estimates for the U.S. Population under Age 65*. Statistical Brief #41. June 2004. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.meps.ahrq.gov/papers/st41/stat41.htm>

Data on the uninsured by region were obtained from Compendium Table 1. Health Insurance Coverage of the Civilian Institutionalized Population: Percent by Type of Coverage and Selected Population Characteristics, United States, First Half of 2004. Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality: Medical Expenditure Panel Survey Household Component, 2004. http://www.meps.ahrq.gov/CompendiumTables/04ch1/T1_A04.pdf

Definitions

Types of hospitals included in HCUP

HCUP is based on data from community hospitals, defined as short-term, non-Federal, general, and other hospitals, excluding hospital units of other institutions (e.g., prisons). HCUP data include OB-GYN, ENT,

orthopedic, cancer, pediatric, public, and academic medical hospitals. They exclude long-term care, rehabilitation, psychiatric, and alcoholism and chemical dependency hospitals, but these types of discharges are included if they are from community hospitals.

Unit of analysis

The unit of analysis is the hospital discharge (i.e., the hospital stay), not a person or patient. This means that a person who is admitted to the hospital multiple times in one year will be counted each time as a separate "discharge" from the hospital.

Region

Region is one of the four regions defined by the U.S. Census Bureau:

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

Charges

Charges represent what the hospital billed for the case. Hospital charges reflect the amount the hospital charged for the entire hospital stay and do not include professional (MD) fees. For the purposes of this Statistical Brief, charges are rounded to the nearest hundred dollars.

Payer

Up to two payers can be coded for a hospital stay in HCUP data. When this occurs, the following hierarchy was used:

- If either payer is listed as Medicaid, payer is "Medicaid."
- For non-Medicaid stays, if either payer is listed as Medicare, payer is "Medicare."
- For stays that are neither Medicaid nor Medicare, if either payer is listed as private insurance, payer is "private insurance."
- For stays that are not Medicaid, Medicare or private insurance, if either payer is some other third party payer, payer is "other," which consists of Worker's Compensation, TRICARE/CHAMPUS, CHAMPVA, Title V, and other government programs.
- For stays that have no third party payer and the payer is listed as "self-pay" or "no charge," payer is "uninsured."

Discharge status

Discharge status indicates the disposition of the patient at discharge from the hospital, and includes the following six categories: routine (to home), transfer to another short-term hospital, other transfers (including skilled nursing facility, intermediate care, and another type of facility, such as a nursing home), home health care, against medical advice (AMA), or died in the hospital.

About the NIS

The HCUP Nationwide Inpatient Sample (NIS) is a nationwide database of hospital inpatient stays. The NIS is nationally representative of all community hospitals (i.e., short-term, non-Federal, non-rehabilitation hospitals). The NIS is a sample of hospitals and it includes all patients from each hospital, regardless of payer. It is drawn from a sampling frame that contains hospitals comprising 90 percent of all discharges in the United States. The vast size of the NIS allows the study of topics at both the national and regional levels for specific subgroups of patients. In addition, NIS data are standardized across years to facilitate ease of use.

About HCUP

HCUP is a family of powerful health care databases, software tools, and products for advancing research. Sponsored by the Agency for Healthcare Research and Quality (AHRQ), HCUP includes the largest all-payer encounter-level collection of longitudinal health care data (inpatient, ambulatory surgery, and emergency department) in the United States, beginning in 1988. HCUP is a Federal-State-Industry Partnership that brings together the data collection efforts of many organizations—such as State data organizations, hospital associations, private data organizations, and the Federal government—to create a national information resource.

For more information about HCUP, visit <http://www.hcup-us.ahrq.gov/>.

HCUP would not be possible without the contributions of the following data collection Partners from across the United States:

Arizona Department of Health Services
California Office of Statewide Health Planning & Development
Colorado Health & Hospital Association
Connecticut Integrated Health Information (Chime, Inc.)
Florida Agency for Health Care Administration
Georgia GHA: An Association of Hospitals & Health Systems
Hawaii Health Information Corporation
Illinois Health Care Cost Containment Council and Department of Public Health
Indiana Hospital & Health Association
Iowa Hospital Association
Kansas Hospital Association
Kentucky Department for Public Health
Maine Health Data Organization
Maryland Health Services Cost Review Commission
Massachusetts Division of Health Care Finance and Policy
Michigan Health & Hospital Association
Minnesota Hospital Association
Missouri Hospital Industry Data Institute
Nebraska Hospital Association
Nevada Division of Health Care Financing and Policy, Department of Human Resources
New Hampshire Department of Health & Human Services
New Jersey Department of Health & Senior Services
New York State Department of Health
North Carolina Department of Health and Human Services
Ohio Hospital Association
Oregon Office for Oregon Health Policy and Research and Oregon Association of Hospitals and Health Systems
Pennsylvania Health Care Cost Containment Council
Rhode Island Department of Health
South Carolina State Budget & Control Board
South Dakota Association of Healthcare Organizations
Tennessee Hospital Association
Texas Department of State Health Services
Utah Department of Health
Vermont Association of Hospitals and Health Systems
Virginia Health Information
Washington State Department of Health
West Virginia Health Care Authority
Wisconsin Department of Health & Family Services

For additional HCUP statistics, visit HCUPnet, our interactive query system at www.hcup.ahrq.gov.

References

For a detailed description of HCUP and more information on the design of the NIS and methods to calculate estimates, please refer to the following publications:

Steiner, C., Elixhauser, A., Schnaier, J. The Healthcare Cost and Utilization Project: An Overview. *Effective Clinical Practice* 5(3):143–51, 2002

Design of the HCUP Nationwide Inpatient Sample, 2003. Online. June 14, 2005. U.S. Agency for Healthcare Research and Quality. http://www.hcup-us.ahrq.gov/db/nation/nis/reports/NIS_2003_Design_Report.jsp

Houchens, R., Elixhauser, A. *Final Report on Calculating Nationwide Inpatient Sample (NIS) Variances, 2001*. HCUP Methods Series Report #2003-2. Online. June 2005 (revised June 6, 2005). U.S. Agency for Healthcare Research and Quality. [http://www.hcup-us.ahrq.gov/reports/CalculatingNIS Variances 200106092005.pdf](http://www.hcup-us.ahrq.gov/reports/CalculatingNIS%20Variances%20106092005.pdf)

Suggested Citation

Elixhauser, A. and Russo, C. A. *Uninsured Hospitalizations, 2003*. HCUP Statistical Brief #7. May 2006. Agency for Healthcare Research and Quality, Rockville, Md. <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb7.pdf>

* * *

AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Statistical Brief and other HCUP data and tools, and to share suggestions on how HCUP products might be enhanced to further meet your needs. Please e-mail us at hcup@ahrq.gov or send a letter to the address below:

Irene Fraser, Ph.D., Director
Center for Delivery, Organization, and Markets
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850

Table 1. Characteristics of uninsured versus insured hospital stays, 2003

	Uninsured	Private insurance	Medicaid	Overall
Number of hospital stays (percent)	1,725,400 (4.5%)	13,264,400 (34.7%)	8,953,800 (23.4%)	38,220,700 (100%)
Percentage by age				
17 and younger	16.3	24.1	31.9	17.0
18-44	50.4	37.9	36.6	26.3
45-64	30.3	33.4	17.9	21.8
65 and older	2.8	4.4	13.5	34.6
Percentage male	51.6	38.9	34.7	40.6
Mean length of stay (days)	3.8	3.7	4.6	4.6
Mean charges	\$16,800	\$16,900	\$16,700	\$19,700
National bill (aggregate charges)	\$29.0 billion	\$222.9 billion	\$149.4 billion	\$753.6 billion

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2003.

Table 2. Uninsured hospital stays, uninsured population, and differences in insured and uninsured hospital stays, by region, 2003

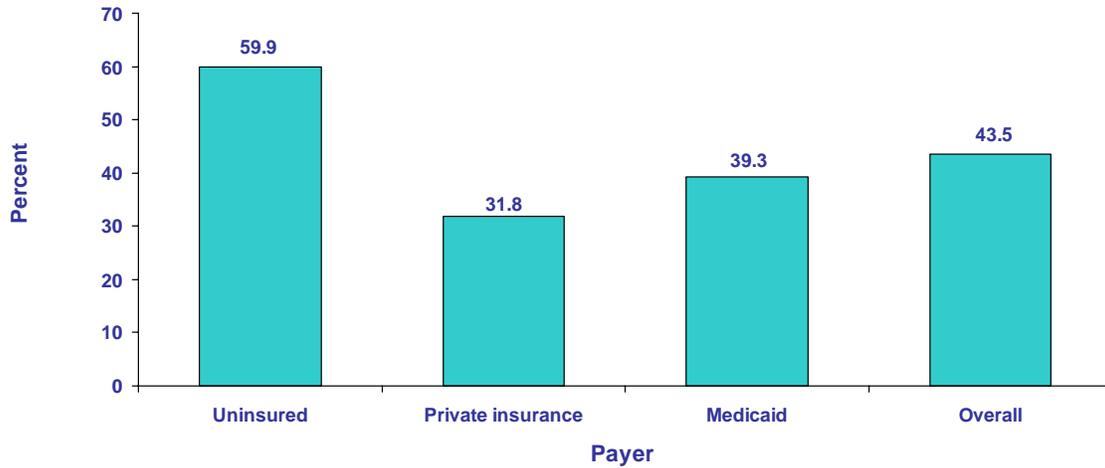
	Northeast	Midwest	South	West
Number of uninsured stays	327,200	322,300	848,700	227,200
Percentage of uninsured stays	19.0	18.7	49.2	13.2
Percentage of all hospital stays	19.8	23.1	38.1	19.1
Percentage of the population that is uninsured	11.6	13.8	19.8	19.2
Hospitalization rate per 10,000 population*				
Uninsured	60.1	49.3	81.2	34.2
Medicaid	337.5	260.8	343.3	274.1
Private insurance	477.0	505.1	447.1	404.7
Overall	1,389.3	1,349.0	1,391.6	1,096.4

*The denominator is the entire population in each region. U.S. Census Bureau, Population Division, Census 2003.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2003.



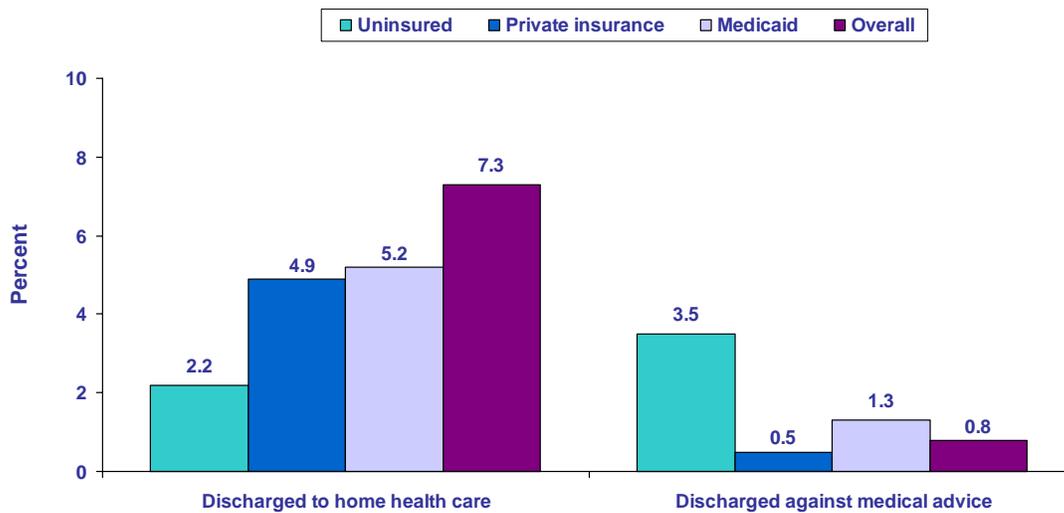
Figure 1. Admissions through the emergency department for uninsured and insured hospital stays, 2003



Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2003.



Figure 2. Hospital discharge status for uninsured and insured hospital stays, 2003



Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2003.