

STATISTICAL BRIEF #4

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Hospitalizations for Alcohol Abuse Disorders, 2003

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Introduction

Alcohol abuse can result in illness, disability, and early death. About 14 million Americans abuse alcohol and more than half of American adults have a close family member who has suffered from alcoholism.* Alcohol abuse problems are an important source of hospital-based medical care and expenses; they may also play a significant role in other illnesses or injuries that require treatment.

This Statistical Brief presents data from the Healthcare Cost and Utilization Project (HCUP) on the use of acute care hospitals for the treatment of alcohol abuse disorders in 2003. Variations in utilization for these hospitalizations are illustrated by patient age and sex. In addition, admissions originating in the emergency room and conditions related to alcohol abuse are evaluated. Even though HCUP includes data exclusively from short-term, acute care hospitals, these data can provide insight into the burden of alcohol abuse on the health care system as well as on particular subgroups of patients. All differences between estimates noted in the text are statistically significant at the 0.05 level or better.

Findings

Alcohol abuse mental disorders were principally responsible for almost 210,000 hospitalizations in 2003 and accounted for aggregate annual charges of about \$2 billion. In addition, alcohol abuse was listed as a concomitant condition for nearly 1.1 million more hospital stays. Thus, over 3 percent of all hospitalizations in 2003 included some mention of alcohol abuse problems. All subsequent statistics are presented for hospital stays that were principally for treatment of alcohol abuse mental disorders.

Differences in hospital stays for alcohol abuse disorders, by sex and age

Figure 1 presents the distribution of hospital stays for alcohol abuse disorders by sex and age. In 2003, nearly three out of four hospital

Highlights

- In 2003, there were nearly 210,000 hospitalizations for alcohol abuse disorders, amounting to about \$2 billion in aggregate charges annually.
- Alcohol abuse was a concomitant condition for an additional 1.1 million hospital stays; thus, over 3 percent of all hospital stays included some mention of alcohol abuse.
- Alcohol abuse disorders ranked as the fourth most common reason for admission among the uninsured and were responsible for 25.3 out of every 1,000 hospital stays for this population.
- Men accounted for nearly three-fourths of all hospital stays for alcohol abuse disorders. This condition was one of the 25 most common reasons for hospitalization among men of all ages and the 4th most common reason among men age 35–44.
- Alcohol abuse was a top-25 condition among all patients age 18–64. More than 90 percent of hospitalizations for alcohol abuse occurred among adult patients under 64, with patients 18–44 accounting for almost half of all hospitalizations.
- Among the uninsured, nearly 78 percent of hospital stays for alcohol abuse originated in the emergency department—a figure 36 percent higher than for patients with private insurance.
- Chronic conditions commonly associated with hospital stays for alcohol abuse included substance abuse disorders, mood disorders, hypertension, alcohol-related liver disease, anxiety disorders, chronic obstructive pulmonary disease, anemia, and esophageal disorders.

* U.S. Department of Health and Human Services. National Institute on Alcohol Abuse and Alcoholism. Alcohol Research & Health: Highlights from the Tenth Special Report to Congress—Health Risks and Benefits of Alcohol Consumption (Volume 24, Number 1). Washington, D.C.: U.S. Government Printing Office, 2000. Retrieved April 27, 2006, from the World Wide Web at <http://pubs.niaaa.nih.gov/publications/arh24-1/05-11.pdf>

stays for alcohol abuse occurred in men, making it one of the top 25 reasons for hospitalization among all men. Patients 18–44 years old accounted for almost half of all hospitalizations for alcohol abuse, while another 42 percent of these hospital stays occurred in individuals ages 45–64. Less than 8 percent of alcohol-related stays occurred among patients 65 and older.

The frequency of alcohol abuse hospitalizations varied by age. Alcohol abuse was most prominent among men ages 35–44, where it ranked as the 4th most common reason for hospitalization. Among 18–24 year old men, it ranked 27th; among 25–34 year old men, it ranked 7th; among 45–54 year old men, it ranked 9th; and among 55–64 year old men, it ranked 29th.

Hospital stays for alcohol abuse, by expected payer

Table 1 displays the distribution of hospital stays for alcohol abuse per 1,000 hospitalizations for each payer type. Among the uninsured, 25.3 out of every 1,000 hospital stays were principally for alcohol abuse—the 4th most common reason for hospitalization in this population (figure 2). Among those with other insurance (Worker's Compensation, TRICARE/CHAMPUS, CHAMPVA, Title V, and other government programs), alcohol abuse ranked as the 15th most common reason for hospitalization, accounting for 13.1 out of every 1,000 stays. For all other payers, considerably fewer hospital stays were for alcohol abuse, ranging from 2.1 per 1,000 Medicare hospitalizations to 6.0 per 1,000 Medicaid hospital stays.

Hospital stays for alcohol abuse disorder originating in the emergency department

Almost two out of three hospitalizations for alcohol abuse (63.8 percent) began in the emergency department. This figure was even greater among the uninsured, where the percentage of hospital stays for alcohol abuse disorders originating in the emergency department was 77.4 percent (table 1). Patients with private insurance had the lowest percentage, with 56.9 percent of hospital stays for alcohol abuse originating in the emergency department.

Conditions commonly associated with hospital stays for alcohol abuse disorders

Table 2 lists the conditions commonly associated with hospitalizations for alcohol abuse disorders. Among hospital stays that were principally for alcohol abuse, 65.0 percent also involved substance abuse disorders, 34.4 percent involved mood disorders, and 23.7 percent involved hypertension. Other chronic conditions commonly associated with hospital stays for alcohol abuse included alcohol-related liver disease (11.5 percent), anxiety disorders (8.7 percent), chronic obstructive pulmonary disease (COPD) (6.8 percent), anemia (6.1 percent), and esophageal disorders (5.8 percent). Concomitant conditions, such as fluid and electrolyte disorders (15.4 percent) and convulsions (14.2 percent), demonstrate the possible acute effects of excessive alcohol use or withdrawal.

Data Source

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

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.

Diagnoses, ICD-9-CM, and Clinical Classifications Software (CCS)

The principal diagnosis is that condition established after study to be chiefly responsible for the patient's admission to the hospital. Secondary diagnoses are conditions that coexist at the time of admission or that develop during the stay.

CCS categorizes patient diagnoses into 260 clinically meaningful categories. This “clinical grouper” makes it easier to quickly understand patterns of diagnoses and procedures. The CCS-MHSA, for use

with mental health and substance abuse disorders, separately classifies ICD-9-CM codes in the mental disorders chapter into categories that more closely approximate the grouping of conditions found in the Diagnosis and Statistical Manual of Mental Disorders (DSM-IV). The CCS-MHSA was used to replace the mental illness categories in the CCS.

Alcohol abuse disorders include ICD-9-CM codes 291.0-291.9, 303.00-303.93, 305.00-305.03.

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.

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."
- For stays that have no third party payer and the payer is listed as "self-pay" or "no charge," payer is "uninsured."

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/CalculatingNISVariances200106092005.pdf>

Suggested Citation

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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
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Agency for Healthcare Research and Quality
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Table 1. Distribution and admission source of hospitalizations for alcohol abuse disorders,* by payer, 2003

Payer	Number (percentage) of hospital stays for alcohol abuse	Rate of alcohol abuse per 1,000 hospital stays	Percentage admitted through the emergency department
Medicare	27,200 (13.0)	2.1	64.3
Medicaid	53,400 (25.5)	6.0	62.0
Private insurance	71,000 (33.9)	5.4	56.9
Uninsured	43,600 (20.8)	25.3	77.4
Other insurance	14,100 (6.7)	13.1	62.0

*Based on principal diagnosis.

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

Table 2. Conditions commonly associated with hospitalizations primarily for alcohol abuse disorders, 2003

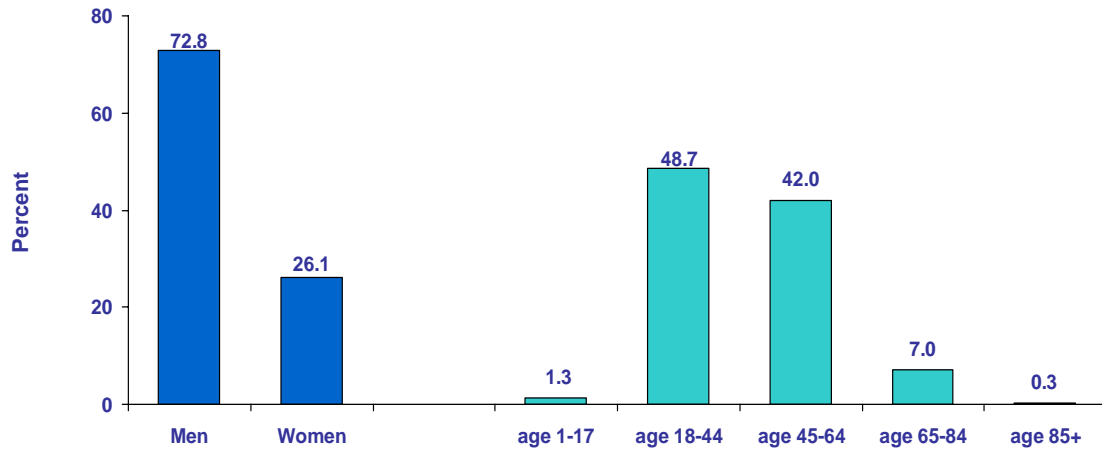
Secondary condition	Number of hospital stays for alcohol abuse	Percentage of hospital stays for alcohol abuse
Substance abuse disorders	136,300	65.0
Mood disorders (depression and bipolar disorder)	72,200	34.4
Essential hypertension	49,600	23.7
Fluid and electrolyte disorders	32,300	15.4
Convulsions	29,700	14.2
Liver disease, alcohol-related	24,100	11.5
Anxiety disorders	18,300	8.7
Chronic obstructive pulmonary disease	14,200	6.8
Anemia	12,800	6.1
Esophageal disorders	12,100	5.8

Note: Percentages do not sum to 100 percent because more than one secondary diagnosis can be noted on a hospital discharge record.

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



Figure 1. Distribution of hospitalizations for alcohol abuse disorders,* by sex and age, 2003



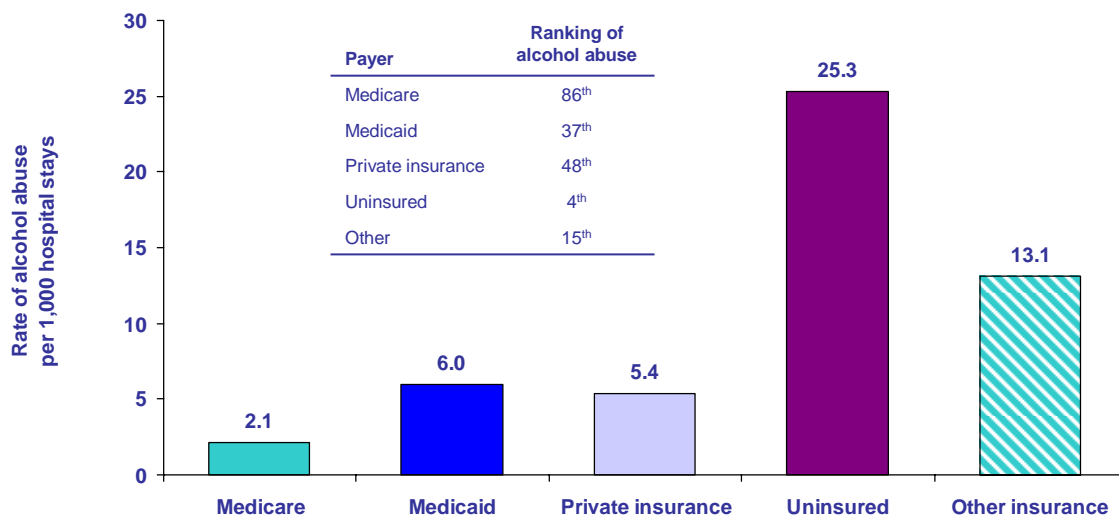
*Based on principal diagnosis.

Note: Percentages do not sum to 100 percent because of a small number of cases with missing values.

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



Figure 2. Rate of alcohol abuse per 1,000 hospital stays and ranking of alcohol abuse,* by payer, 2003



*Based on principal diagnosis.

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