HEALTHCARE COST AND UTILIZATION PROJECT

Agency for Healthcare Research and Quality

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# Cancer Hospitalizations for Adults, 2009

*Rebecca Anhang Price, PhD, Elizabeth Stranges, MS, Anne Elixhauser, PhD*

## Introduction

Cancer is the leading cause of death among men and women under age 85.[1] The most commonly diagnosed types of cancer for adult men are prostate, lung, and colorectal; for adult women, breast, lung and colorectal.[2] Cancer death rates decreased by 22.2 percent in men and 13.9 percent in women between 1990–1991 and 2007, largely due to decreases in death rates for lung and prostate cancers among men, breast cancers among women, and colorectal cancers among both men and women. Decreased death rates for breast, colorectal, and prostate cancers during this time are largely attributable to improvements in early detection and treatment.[3]

This Statistical Brief presents data from the Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample on hospital stays for cancer care among adults age 18 and older in 2009. Characteristics of these stays are compared by type of cancer and compared with adult hospitalizations for all other conditions. The most common cancer hospitalizations are identified and trends in the number of stays from 2000 to 2009 are displayed. Stays with a secondary diagnosis of cancer are enumerated, and the most frequent principal diagnoses for these stays are noted. All differences between estimates noted in the text are statistically significant at the 0.05 level or better.

## Findings

*General findings*

In 2009, there were 4.7 million cancer-related hospitalizations among adults in the U.S. In one-quarter of them, cancer was identified as the principal diagnosis (1.2 million stays). Adult stays principally for cancer cost $20.1 billion, accounting for about 6 percent of adult inpatient hospital costs. Between 2000 and 2009, the number of adult hospital stays principally for cancer decreased by 4 percent, while the number of hospital stays

### Highlights

- In 2009, there were 4.7 million cancer-related hospitalizations among adults. Of these, 1.2 million stays had cancer identified as the principal diagnosis. Adult stays principally for cancer cost $20.1 billion, accounting for 6.0 percent of adult inpatient hospital costs.
- Among adult men, the most common cancer hospitalizations in 2009 were for prostate cancer, secondary malignancies (i.e., metastatic cancer), and lung cancer. Between 2000 and 2009, kidney cancer was responsible for the largest increase in cancer hospitalizations for men, up 40 percent. Stays for colon cancer among men declined 14 percent and stays for bladder cancer declined 12 percent.
- Among adult women, the most common cancer hospitalizations in 2009 were for secondary malignancies, breast cancer and lung cancer. Between 2000 and 2009, hospitalizations for breast cancer decreased 28 percent and those for cervical cancer decreased 26 percent.
- Secondary malignancies, cancer of bronchus and lung, and cancer of the colon accounted for over one-third of the total cost of hospital stays principally for cancer.
- The most expensive cancer hospital stays, in terms of mean cost per stay, were for leukemia ($40,200 per stay), multiple myeloma ($28,700 per stay), and non-Hodgkin's lymphoma ($24,900 per stay).
- Costs per hospital day were highest for prostate cancer ($4,600 per day), breast cancer ($4,100 per day), and thyroid cancer ($3,500 per day).
- For hospital stays with a secondary diagnosis of cancer, the most common principal diagnoses were complications of surgical procedures/medical care or complications of devices, implants or grafts (5.5 percent), pneumonia (5.2 percent), and septicemia (4.4 percent).

[1] Heron M. Deaths: Leading causes for 2007. National vital statistics reports; vol 59, no 8. Hyattsville, MD: National Center for Health Statistics. 2011.

[2] Altekruse S.F., Kosary C.L., Krapcho M., (editors) ea. *Surveillance, Epidemiology, and End Results Cancer Statistics Review, 1975–2007*. Bethesda, MD: National Cancer Institute; 2010.

[3] Siegel R., Ward E., Brawley O., Jemal A. Cancer statistics, 2011: The impact of eliminating socioeconomic and racial disparities on premature cancer deaths. *CA Cancer J Clin*. Jul–Aug 2011;61(4):212–236.

for all other reasons increased by 11 percent (data not shown).[4] Some of the decrease in the number of inpatient stays for cancer may be due to the growing number of outpatient cancer treatment options.

*General characteristics of hospital stays for cancer*

Table 1 presents the general characteristics of adult hospitalizations principally for cancer compared to hospitalizations for all other conditions in 2009. On average, adults hospitalized for cancer were 2.5 years older than those admitted for other conditions (64.0 years of age versus 61.5 years). Similar to stays for all other conditions, hospital stays primarily for cancer were fairly equally divided among males and females.

The in-hospital death rate during stays principally for cancer was 5.8 percent—more than twice as high as for all other hospital stays.

About 56 percent of adult hospitalizations primarily for cancer were covered by government payers (47.8 percent by Medicare and 8.6 percent by Medicaid) and 37.2 percent were paid for by private insurance. On the other hand, for all other adult stays, a larger percentage were covered by government payers (62.4 percent) or were uninsured and fewer were privately insured.

On average, adult hospitalizations principally for cancer were 1.6 days longer and cost more than hospitalizations for other conditions (6.6 days versus 5.0 days; $16,400 versus $10,700 per stay; $3,300 versus $2,800 per day).

**Table 1. Characteristics of adult hospitalizations for cancer compared to non-maternal hospitalizations for all other conditions, 2009**

| | Hospital stays principally for cancer | All other hospital stays[1] |
|---|---|---|
| Number of stays | 1,222,600 | 27,416,000 |
| Percent of all non-maternal hospital stays | 4.3% | 95.7% |
| Mean age | 64.0 | 61.5 |
| Female | 50.7% | 53.8% |
| Died in hospital* | 5.8% | 2.4% |
| *Percentage distribution of stays* | | |
| Payer* | | |
| Medicare | 47.8% | 51.5% |
| Medicaid | 8.6% | 10.9% |
| Private | 37.2% | 27.5% |
| Uninsured | 3.6% | 6.7% |
| Other | 2.8% | 3.4% |
| *Utilization characteristics* | | - |
| Mean length of stay, days* | 6.6 | 5.0 |
| Mean hospital cost per stay* | $16,400 | $10,700 |
| Mean daily hospital cost * | $3,300 | $2,800 |
| Total aggregate costs for U.S. (billions) | $20.1 | $294.3 |

[1]Excludes maternal stays.
*Cancer stays are significantly different from all other non-maternal stays at $p < 0.05$.
Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost, and Utilization Project, Nationwide Inpatient Sample, 2009

[4] The number and cost of maternal stays was excluded from the totals provided here. Maternal stays were also excluded from the non-cancer hospital stay data presented in tables 1 and 2.

As shown in table 2, cancer hospitalization rates among those 65 and older were 16 times higher than among 18–44 year olds and 2.5 times higher than among 45–64 year olds. In contrast, the hospitalization rate for all other non-maternal care was only 7 times higher among those 65 and older than among 18–44 year olds but also about 2.5 times higher than among 45–64 year olds.

There were no significant differences in cancer hospitalization rates among patients residing in higher and lower income communities, rural and urban areas, and different regions of the United States. In contrast, rates of all other non-maternal hospital stays were 25 percent higher among patients from lower income communities than among those from all other communities. In addition, rates of all other non-maternal hospital stays were approximately 30 percent lower in the West than in any other region.

**Table 2. Characteristics of adult hospitalizations for cancer compared to non-maternal hospitalizations for all other conditions, rates per 10,000 population, 2009**

| | **Hospital stays principally for cancer (*rate per population*)** | **All other hospital stays[1] (*rate per population*)** |
|---|---|---|
| Age group | | |
| 18 to 44 years | 9.5 | 472.9 |
| 45 to 64 years | 63.0 | 1,156.5 |
| 65+ | 156.1 | 3,266.7 |
| Median household income for patient's ZIP Code of residence | | |
| Lowest quartile | 50.8 | 1,343.7[a] |
| All other quartiles | 51.4 | 1078.9 |
| Patient residence | | |
| Large central metropolitan area | 53.0 | 1,140.4 |
| Large fringe metropolitan area (suburbs) | 52.4 | 1,128.2 |
| Medium and small metropolitan area | 46.8 | 1,052.1[b] |
| Micropolitan and noncore (rural) | 6.8 | 1,371.9 |
| Region | | |
| Northeast | 57.9 | 1,339.6 |
| Midwest | 60.1 | 1,278.2 |
| South | 49.7 | 1,231.1 |
| West | 46.4 | 889.8[c] |

[1]Excludes maternal stays.

[a] The rate of all other non-maternal stays in the lowest income quartile is significantly different than all other quartiles at $p < 0.05$.

[b] The rate of all other non-maternal stays in medium and small metro areas is significantly different than in rural areas at $p < 0.05$.

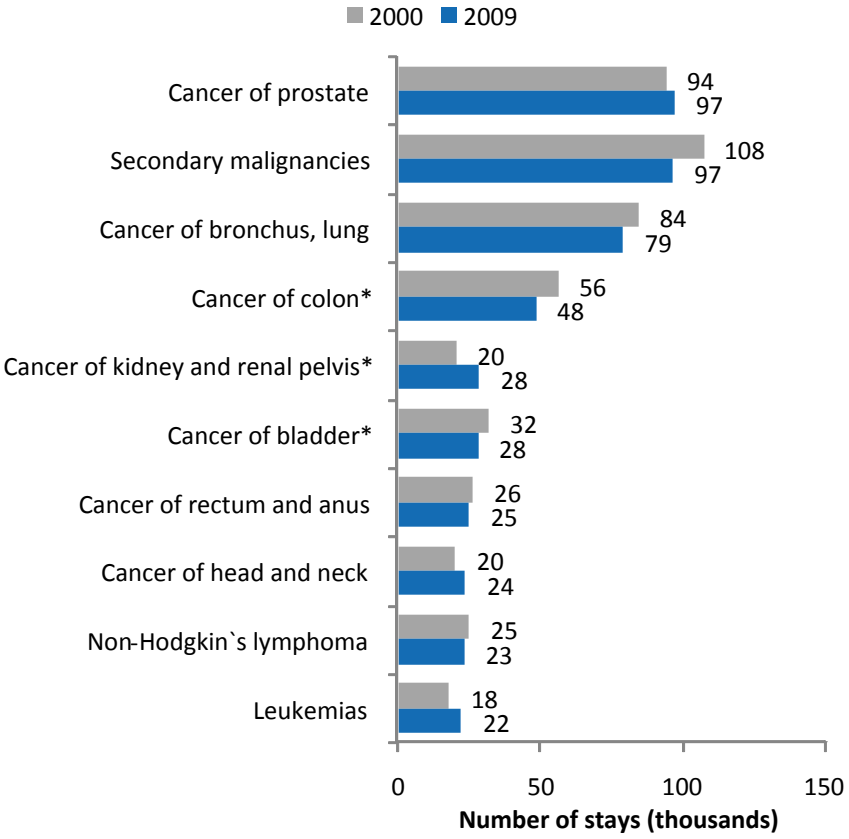
[c] The rate of all other non-maternal stays in the West is significantly different than in the Northeast, Midwest, and South at $p < 0.05$.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2009

*Trends in the most common cancer hospitalizations*

Among adult men, the most common cancer hospitalizations in 2009 were for prostate cancer, secondary malignancies (i.e., metastatic cancers), and lung cancer (figure 1). From 2000 to 2009, kidney cancer hospitalizations increased 40 percent, while stays for colon cancer and bladder cancer decreased 14 percent and 12 percent, respectively.

**Figure 1. Top 10 most frequent cancer hospitalizations‡ for adult men, 2000 and 2009**



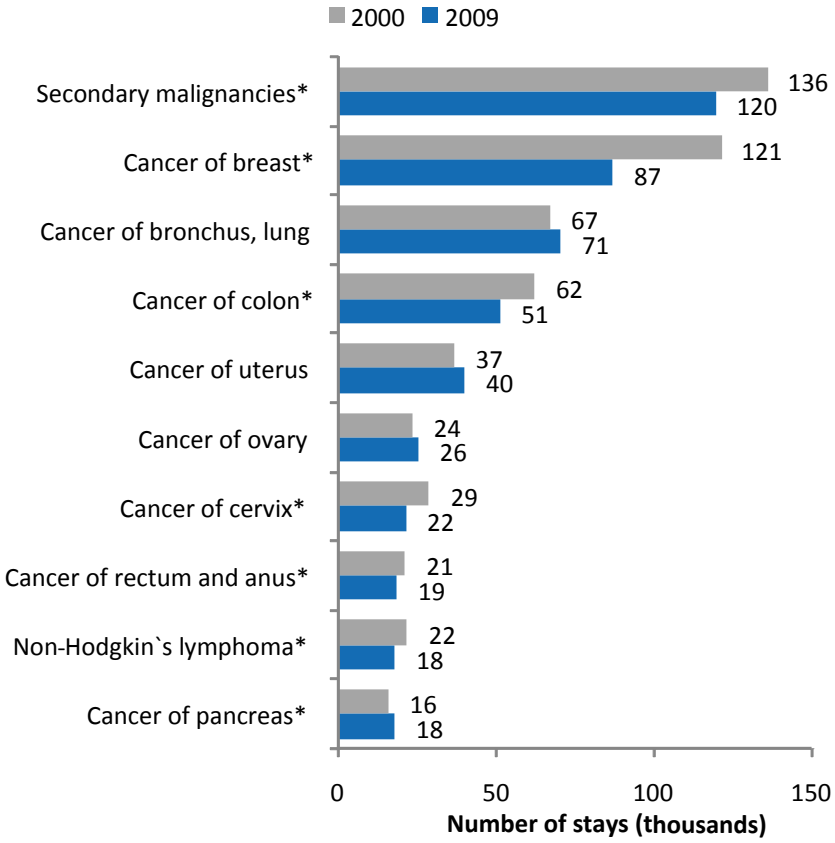

‡Includes hospital stays with a principal diagnosis of cancer.

*The difference in the number of stays in 2000 and 2009 is statistically significant at p<0.05.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost, and Utilization Project, Nationwide Inpatient Sample, 2009

Among adult women, the most common cancer hospitalizations in 2009 were for secondary malignancies, breast cancer, and lung cancer (figure 2). From 2000 to 2009, stays for lung cancer, cancer of the uterus and cancer of the ovary remained relatively stable. Stays for all other common cancers decreased. Most notably, hospitalizations decreased 28 percent for breast cancer and 26 percent for cervical cancer.

**Figure 2. Top 10 most frequent cancer hospitalizations‡ for adult women, 2000 and 2009**




‡Includes hospital stays with a principal diagnosis of cancer.
*The difference in the number of stays in 2000 and 2009 is statistically significant at p<0.05.
Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2009

*Cost and length of stay by cancer site*

As shown in table 3, the most common hospitalizations principally for cancer in 2009 were secondary malignancies (216,500 stays), cancer of the bronchus and lung (149,700 stays), and cancer of the colon (99,800 stays). Similarly, aggregate costs for adult cancer hospitalizations were highest for these three conditions: $3.2 billion for secondary malignancies, $2.3 billion for lung cancer and $1.8 billion for colon cancer.

**Table 3. Characteristics of hospital stays with a principal diagnosis of cancer, 2009**

| Principal diagnosis | Number of discharges | Mean length of stay, days | Mean hospital cost | | Total cost, $, in millions |
|---|---|---|---|---|---|
| | | | Per stay, $ | Per day, $ | |
| *All adult stays with a principal diagnosis of cancer* | 1,222,600 | 6.6 | $16,400 | $2,500 | $20,062 |
| Secondary malignancies | 216,500 | 6.7 | $14,700 | $2,200 | $3,179 |
| Cancer of bronchus, lung | 149,700 | 7.0 | $15,600 | $2,200 | $2,335 |
| Cancer of colon | 99,800 | 8.3 | $18,000 | $2,200 | $1,797 |
| Cancer of prostate | 97,500 | 2.4 | $10,900 | $4,600 | $1,067 |
| Cancer of breast | 88,000 | 2.5 | $10,300 | $4,100 | $905 |
| Cancer of kidney and renal pelvis | 46,400 | 4.9 | $14,100 | $2,900 | $656 |
| Cancer of rectum and anus | 43,700 | 8.2 | $18,300 | $2,200 | $801 |
| Non-Hodgkin's lymphoma | 41,300 | 10.2 | $24,900 | $2,400 | $1,028 |
| Cancer of uterus | 40,300 | 3.9 | $11,600 | $3,000 | $469 |
| Leukemias | 38,400 | 15.5 | $40,200 | $2,600 | $1,545 |
| Cancer of bladder | 36,400 | 6.2 | $15,200 | $2,400 | $554 |
| Cancer of pancreas | 36,100 | 8.1 | $17,400 | $2,200 | $630 |
| Cancer of head and neck | 33,400 | 7.5 | $19,900 | $2,600 | $666 |
| Cancer of brain and nervous system | 30,800 | 6.6 | $19,400 | $2,900 | $599 |
| Cancer of ovary | 25,600 | 6.5 | $15,200 | $2,300 | $389 |
| Cancer of thyroid | 23,800 | 2.3 | $8,100 | $3,500 | $193 |
| Cancer of stomach | 23,000 | 9.8 | $22,200 | $2,300 | $510 |
| Cancer of liver/intrahepatic bile duct | 21,800 | 6.4 | $16,200 | $2,500 | $353 |
| Cancer of cervix | 21,600 | 3.3 | $9,900 | $3,000 | $213 |
| Cancer of other GI organs/peritoneum | 19,900 | 9.2 | $21,300 | $2,300 | $423 |
| Multiple myeloma | 18,200 | 11.6 | $28,700 | $2,500 | $522 |
| Cancer of esophagus | 13,700 | 9.3 | $22,200 | $2,400 | $305 |
| Cancer of bone and connective tissue | 12,300 | 6.9 | $19,600 | $2,800 | $241 |

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2009

The most expensive cancer hospitalizations were for leukemia ($40,200 mean cost per stay), multiple myeloma ($28,700), and non-Hodgkin's lymphoma ($24,900). These three cancers also resulted in the longest average lengths of stay: 15.5 days for leukemia, 11.6 days for multiple myeloma, and 10.2 days for non-Hodgkin's lymphoma. However, the highest costs per hospital day were for cancer of the prostate ($4,600 per day), cancer of the breast ($4,100 per day), and cancer of the thyroid ($3,500 per day).

*Most common secondary cancer diagnoses*

In addition to the 1.2 million hospital stays with a principal diagnosis of cancer, 3.4 million stays had a secondary diagnosis of cancer, where patients were hospitalized with a principal diagnosis other than

cancer. Stays with a secondary diagnosis of cancer cost $38.5 billion, bringing the total cost of cancer-related hospital stays to $58.6 billion.

Consistent with the most commonly occurring stays with a principal diagnosis of cancer, nearly one-fifth (18.1 percent) of all stays with a secondary diagnosis of cancer were for breast cancer, 14.9 percent were for prostate cancer, and 14.6 percent for secondary malignancies, respectively (table 4).

**Table 4. Most frequent secondary cancer diagnoses among adults, 2009**

| All-listed cancer diagnosis | Number of stays | Percentage distribution |
|---|---|---|
| All stays with secondary diagnosis of cancer | 3,430,800 | 100.0% |
| Cancer of breast | 619,700 | 18.1% |
| Cancer of prostate | 511,900 | 14.9% |
| Secondary malignancies | 499,300 | 14.6% |
| Cancer of bronchus, lung | 389,200 | 11.3% |
| Cancer of colon | 358,900 | 10.5% |
| Non-Hodgkin`s lymphoma | 208,200 | 6.1% |
| Other non-epithelial cancer of skin | 193,600 | 5.6% |
| Leukemias | 172,600 | 5.0% |
| Cancer of bladder | 156,500 | 4.6% |
| Cancer of kidney and renal pelvis | 115,800 | 3.4% |

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2009

*Most common principal reasons for hospitalizations with cancer as a secondary diagnosis*

One in twenty hospital stays with a secondary diagnosis of cancer (5.2 percent) had a principal diagnosis of pneumonia. Another 4.4 percent of secondary cancer stays had a principal diagnosis of septicemia. Approximately 5.5 percent of all stays with a secondary diagnosis of cancer had a principal diagnosis of a treatment-related complication: complication of surgical procedures or medical care (2.8 percent) or complication of devices, implants or grafts (2.7 percent). Stays primarily for circulatory disorders, including congestive heart failure (3.5 percent of cancer-related stays) and cardiac dysrhythmias (3.0 percent), were also common principal diagnoses.

**Table 5. Most frequent principal diagnoses among adults with secondary cancer diagnoses, 2009**

| Principal diagnosis | Number of stays | Percentage distribution |
|---|---|---|
| All stays with secondary diagnosis of cancer | 3,430,800 | 100.0% |
| Pneumonia | 177,700 | 5.2% |
| Septicemia | 151,800 | 4.4% |
| Maintenance chemotherapy; radiotherapy | 132,100 | 3.8% |
| Congestive heart failure; nonhypertensive | 120,000 | 3.5% |
| Chronic obstructive pulmonary disease and bronchiectasis | 102,100 | 3.0% |
| Cardiac dysrhythmias | 101,500 | 3.0% |
| Complications of surgical procedures or medical care | 96,500 | 2.8% |
| Osteoarthritis | 94,700 | 2.8% |
| Complication of device; implant or graft | 93,100 | 2.7% |
| Fluid and electrolyte disorders | 84,600 | 2.5% |

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2009

## Data Source

The estimates in this Statistical Brief are based on data from the HCUP NIS 2009. Historical data were drawn from the 2000 NIS. Supplemental sources included data from the U.S. Census Bureau, Population Division, Annual Estimates of the Population for the United States, Regions, and Divisions.

## Definitions

*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 concomitant conditions that coexist at the time of admission or that develop during the stay.

ICD-9-CM is the International Classification of Diseases, Ninth Revision, Clinical Modification, which assigns numeric codes to diagnoses. There are about 13,600 ICD-9-CM diagnosis codes.

CCS categorizes ICD-9-CM diagnoses into a manageable number of clinically meaningful categories. This "clinical grouper" makes it easier to quickly understand patterns of diagnoses and procedures.

*Case definition*
For this report, hospitalizations for cancer were defined as those with a principal diagnosis of CCS 11-43.

*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. Excluded are long-term care, rehabilitation, psychiatric, and alcoholism and chemical dependency hospitals. However, if a patient received long-term care, rehabilitation, or treatment for psychiatric or chemical dependency conditions in a community hospital, the discharge record for that stay will be included in the NIS.

*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.

*Costs and charges*
Total hospital charges were converted to costs using HCUP Cost-to-Charge Ratios based on hospital accounting reports from the Centers for Medicare and Medicaid Services (CMS).[5] Costs will reflect the actual expenses incurred in the production of hospital services, such as wages, supplies, and utility costs, while charges represent the amount a hospital billed for the case. For each hospital, a hospital-wide cost-to-charge ratio is used. Hospital charges reflect the amount the hospital billed for the entire hospital stay and do not include professional (physician) fees. For the purposes of this Statistical Brief, costs are reported to the nearest hundred.

*Urban-rural location*
Urban-rural location is one of six categories as defined by the National Center for Health Statistics:

- **Large Central Metropolitan**: Central counties of metropolitan areas with a population of 1 million or greater
- **Large Fringe Metropolitan**: Fringe counties of counties of metropolitan areas with a population of 1 million or greater
- **Medium Metropolitan**: Counties in metro area of 250,000–999,999 population

[5]HCUP Cost-to-Charge Ratio Files (CCR). Healthcare Cost and Utilization Project (HCUP). 2001–2008. U.S. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/db/state/costtocharge.jsp.

- **Small Metropolitan**: Counties in metro areas of 50,000–249,999 population
- **Micropolitan**: Micropolitan counties, i.e. a non-metropolitan county with an area of 10,000 or more population
- **Non-core**: Non-metropolitan and non-micropolitan counties

*Median community-level income*
Median community-level income is the median household income of the patient's ZIP Code of residence. The cut-offs for the quartile designation are determined using ZIP Code demographic data obtained from Claritas. The income quartile is missing for homeless and foreign patients.

*Payer*
Payer is the expected primary payer for the hospital stay. To make coding uniform across all HCUP data sources, payer combines detailed categories into more general groups:

- Medicare includes fee-for-service and managed care Medicare patients.
- Medicaid includes fee-for-service and managed care Medicaid patients. Patients covered by the State Children's Health Insurance Program (SCHIP) may be included here. Because most state data do not identify SCHIP patients specifically, it is not possible to present this information separately.
- Private insurance includes Blue Cross, commercial carriers, and private HMOs and PPOs.
- Other includes Workers' Compensation, TRICARE/CHAMPUS, CHAMPVA, Title V, and other government programs.
- Uninsured includes an insurance status of "self-pay" and "no charge".

When more than one payer is listed for a hospital discharge, the first-listed payer is used.

*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

*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 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.

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

**Alaska** State Hospital & Nursing Home Association
**Arizona** Department of Health Services
**Arkansas** Department of Health
**California** Office of Statewide Health Planning and Development
**Colorado** Hospital Association
**Connecticut** Hospital Association
**Florida** Agency for Health Care Administration
**Georgia** Hospital Association
**Hawaii** Health Information Corporation
**Illinois** Department of Public Health
**Indiana** Hospital Association
**Iowa** Hospital Association
**Kansas** Hospital Association
**Kentucky** Cabinet for Health and Family Services
**Louisiana** Department of Health and Hospitals
**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
**Mississippi** Department of Health
**Missouri** Hospital Industry Data Institute
**Montana** MHA – An Association of Montana Health Care Providers
**Nebraska** Hospital Association
**Nevada** Department of Health and Human Services
**New Hampshire** Department of Health & Human Services
**New Jersey** Department of Health and Senior Services
**New Mexico** Health Policy Commission
**New York** State Department of Health
**North Carolina** Department of Health and Human Services
**Ohio** Hospital Association
**Oklahoma** State Department of Health
**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 Services
**Wyoming** Hospital Association

### 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 includes all patients from each hospital, regardless of payer. It is drawn from a sampling frame that contains hospitals comprising about 95 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.

## For More Information

For more information about HCUP, visit www.hcup-us.ahrq.gov.

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

For information on other hospitalizations in the U.S., download HCUP Facts and Figures: *Statistics on Hospital-Based Care in the United States in 2008*, located at http://www.hcup-us.ahrq.gov/reports.jsp.

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

*Introduction to the HCUP Nationwide Inpatient Sample, 2008*. Online. May 2010. U.S. Agency for Healthcare Research and Quality. http://hcup-us.ahrq.gov/db/nation/nis/NIS_2008_INTRODUCTION.pdf

Houchens R. L., Elixhauser A. *Using the HCUP Nationwide Inpatient Sample to Estimate Trends*. (Updated for 1988–2004). HCUP Methods Series Report #2006-05 Online. August 18, 2006. U.S. Agency for Healthcare Research and Quality. http://www.hcup-us.ahrq.gov/reports/2006_05_NISTrendsReport_1988-2004.pdf

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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
Center for Delivery, Organization, and Markets
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850