Health System Affiliation and Characteristics of Inpatient Stays at Rural and Metropolitan Hospitals, 2016

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Introduction

A shift from traditional fee-for-service-based to value-based payments has incentivized hospitals and health systems to integrate, allowing them to better respond to new healthcare delivery and payment models.[1,2] Rural hospitals have lower profitability than their urban counterparts and are more vulnerable to closure.[2] System affiliation may be especially beneficial for rural hospitals by giving them access to shared resources and technologies.[2] Conceptually, integration may improve the value and quality of hospital care and patient outcomes.[3] However, integration also may result in eliminating unprofitable service lines, leaving gaps in care for vulnerable populations.[4] Understanding the landscape, characteristics, and outcomes of inpatient stays across the U.S. in health system-affiliated versus unaffiliated hospitals in urban and rural areas is important as health system affiliation continues to become more common.[5]

This Healthcare Cost and Utilization Project (HCUP) Statistical Brief presents statistics on inpatient stays at rural and metropolitan hospitals affiliated and unaffiliated with health systems using the 2016 State Inpatient Databases (SID) for 47 States and the District of Columbia. Community nonrehabilitation general acute care hospitals were classified as health system affiliated or unaffiliated using data from the Agency for Healthcare Research and Quality's (AHRQ's) 2016 Compendium of U.S. Health Systems.[6] The compendium focuses on integration between hospitals and physicians (vertical integration), rather than on hospital mergers (horizontal integration). Only health systems with at least one community nonrehabilitation general acute care hospital in the Compendium that linked to a hospital in the SID are included in this analysis.

This Statistical Brief describes the distribution of general acute care hospitals and inpatient stays across U.S. health systems. Second, the percentage of hospitals and of inpatient stays at hospitals that were affiliated with a health system is shown for rural and metro areas across nine census divisions. Finally, the characteristics of stays at system-affiliated hospitals are compared with those at unaffiliated hospitals, overall and by rural/metro location of the hospital. Because of the large sample size of the SID data, small differences can be statistically significant. Thus, only percentage differences greater than or equal to 10 percent are discussed in the text.

Highlights

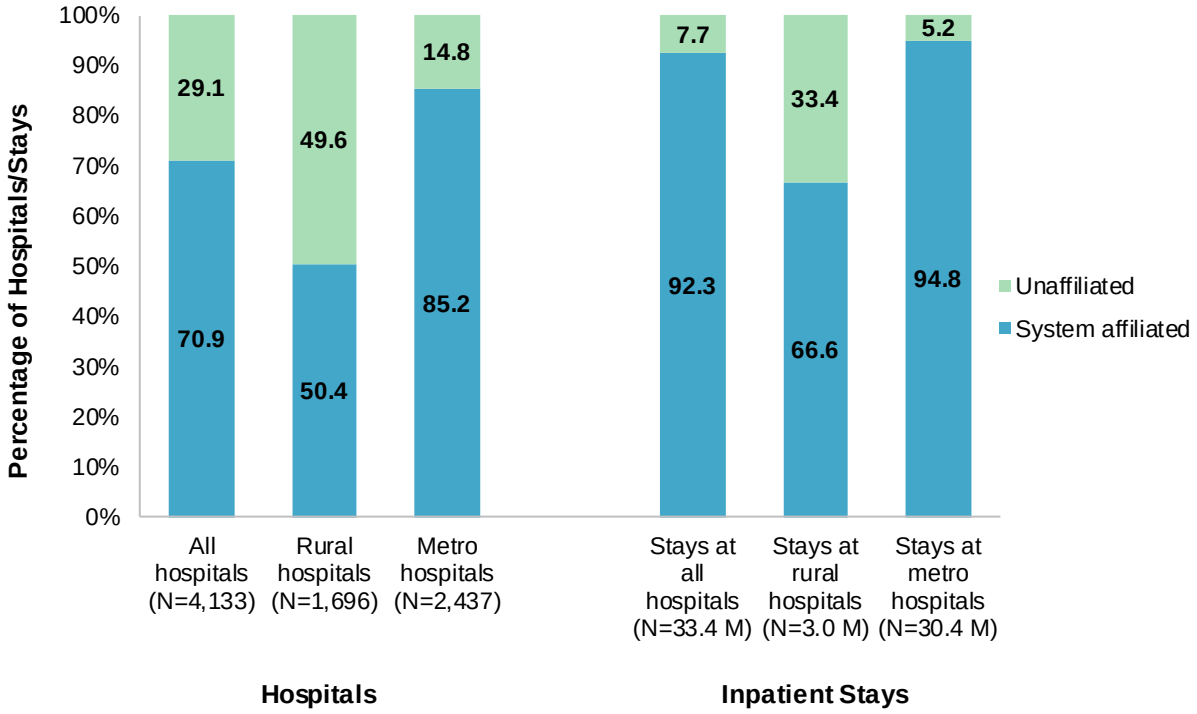
- A total of 70.9 percent of hospitals, representing 92.3 percent of inpatient stays across 47 States and the District of Columbia, were affiliated with a health system in 2016.
- Health system affiliation was higher for hospitalizations in metropolitan areas (85.2 percent of hospitals and 94.8 percent of stays) than in rural areas (50.4 percent of hospitals and 66.6 percent of stays).
- Nearly one in five inpatient stays in 2016 (18.0 percent) was at a hospital that was part of one of seven health systems. These seven health systems each included 50 or more general acute care hospitals.
- Inpatient costs were higher at metro than at rural hospitals. However, the average cost per stay was similar at system-affiliated and unaffiliated rural ($8,800 and $8,900) and metro ($11,600 and $11,300) hospitals.
- Surgical stays constituted a greater percentage of stays at health system-affiliated than at unaffiliated hospitals (20.9 vs. 14.4 percent).
- Nearly 1 in 3 stays at unaffiliated metro hospitals were expected to be paid by Medicaid, compared with 21–22 percent of stays at system-affiliated metro and system-affiliated and unaffiliated rural hospitals. At rural hospitals, the expected payer distribution was similar across affiliated and unaffiliated hospitals.

Findings

Distribution of hospitals and inpatient stays across health systems in 47 States and the District of Columbia, 2016

Figure 1 displays the percentage of general acute care hospitals that were affiliated with a health system in 2016 and the percentage of inpatient stays at system-affiliated hospitals.

Figure 1. Health system affiliation of hospitals and inpatient stays, 2016



Abbreviation: M, million

Note: Includes community nonrehabilitation general acute care hospitals and stays at those hospitals.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID) from 47 States and the District of Columbia (all except Alabama, Idaho, and New Hampshire) and AHRQ Compendium of U.S. Health Systems, 2016

- **Overall, 7 in 10 hospitals were system affiliated and 9 in 10 inpatient stays were at a hospital affiliated with a health system.**

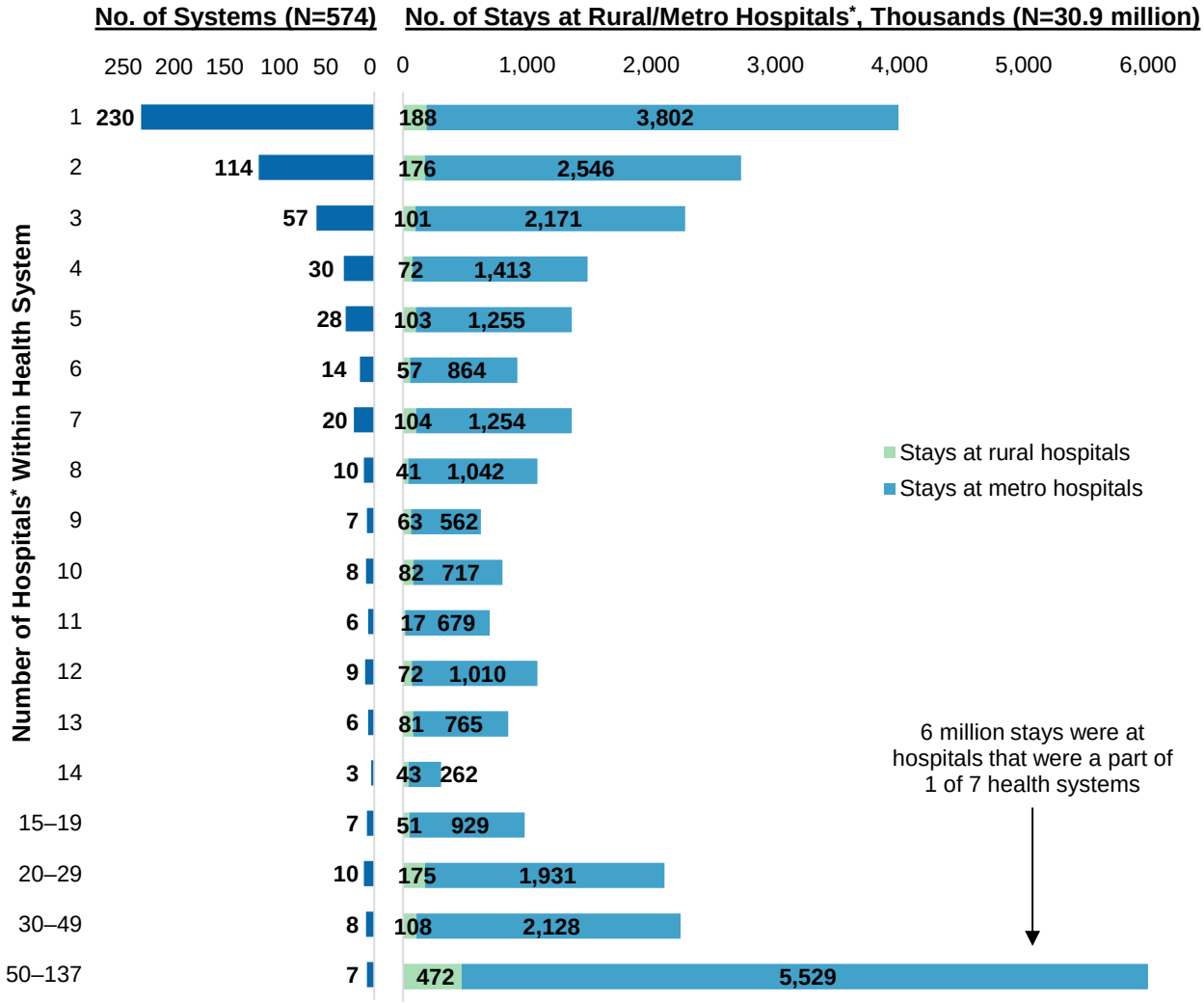
  Of the 4,133 general acute care hospitals in 47 States and the District of Columbia, 70.9 percent were system affiliated. Of the inpatient stays at the 4,133 hospitals, 92.3 percent were at a hospital affiliated with a health system.

- **Health system affiliation was more common in metro than in rural areas.**

  In 2016, only half of all rural general acute care hospitals were system affiliated compared with 85.2 percent of metro hospitals. Similarly, only 66.6 percent of stays in rural areas were at system-affiliated hospitals, whereas 94.8 percent of stays in metro areas were at hospitals affiliated with a health system.

Figure 2 displays, on the left side, the distribution of health systems by the number of participating general acute care hospitals within the system. The right side of the figure shows the number of inpatient stays at general acute care hospitals within those systems by rural/metro location of the hospital.

Figure 2. Distribution of inpatient stays across health systems, by system size and rural/metro location of the hospital, 2016



* Reflects the number of community nonrehabilitation general acute care hospitals within the system. A system could have rehabilitation, long-term care, or specialty hospitals that are not reflected in this analysis. Only health systems with at least one community nonrehabilitation general acute care hospital and that linked to a hospital in the HCUP SID are included.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID) from 47 States and the District of Columbia (all except Alabama, Idaho, and New Hampshire) and AHRQ Compendium of U.S. Health Systems, 2016

- **In 2016, 40 percent of health systems across 47 States and the District of Columbia consisted of only one community general acute care hospital.**

  In 2016, across 47 States and the District of Columbia, there were 230 health systems with only one community general acute care hospital. This equated to 40.1 percent of the 574 total systems included in this Brief. Note that health systems may contain other long-term care facilities, specialty hospitals and/or physician groups, which are not represented in these statistics.

- **In 2016, approximately 6 million inpatient stays were at hospitals that were part of one of seven health systems.**

  Of the 30.9 million inpatient stays at health system-affiliated general acute care hospitals in 47 States and the District of Columbia, 6 million (19.4 percent) were at a hospital that was a part of one of seven health systems. Out of all inpatient stays (33.4 million, see Table 1), 6 million equates to 18.0 percent of stays at hospitals that were a part of one of seven health systems. These seven systems each included 50 or more general acute care hospitals.

  Overall, 56 health systems were in the top 10 percent of systems with the most general acute care hospitals (11 hospitals or more). These hospitals accounted for 14.3 million stays, which is 42.8 percent of the 33.4 million inpatient stays in 2016.

- **A greater percentage of stays at hospitals in the largest health systems were in rural areas, compared with stays at hospitals in the smallest health systems.**

  For the seven health systems with 50 or more general acute care hospitals, 7.9 percent of stays (472,000 of 6 million) were at rural hospitals. In comparison, for the 230 health systems with only one general acute care hospital, 4.7 percent of stays (188,000 of 4.0 million) were at rural hospitals.

Regional distribution of hospitals and of inpatient stays at hospitals affiliated with a health system, 2016
Table 1 presents the percentage of inpatient stays in 47 States and the District of Columbia that were at hospitals affiliated with a health system in 2016, overall and by census division of the patient's residence. Percentages are presented for hospitals in all locations and separately for those in rural and metro areas.

Table 1. Distribution of hospitals and of inpatient stays at hospitals affiliated with a health system, by U.S. census division, 2016

Census region and division	All hospitals		Rural hospitals		Metro hospitals	
	Total, N†	System affiliated, %	Total, N†	System affiliated, %	Total, N†	System affiliated, %
Hospitals, total N, and percent of hospitals that were system affiliated						
Total, 47 States and the District of Columbia	4,133	70.9	1,696	50.4	2,437	85.2
Northeast						
New England*	139	85.6	37	67.6	102	92.2
Middle Atlantic	373	84.2	74	60.8	299	90.0
Midwest						
East North Central	676	76.2	269	59.9	407	87.0
West North Central	618	59.5	424	48.3	194	84.0
South						
South Atlantic	652	81.7	195	58.5	457	91.7
East South Central*	267	68.9	162	58.0	105	85.7
West South Central	604	57.5	274	35.8	330	75.5
West						
Mountain*	306	65.7	154	41.6	152	90.1
Pacific	498	70.5	107	45.8	391	77.2
Inpatient stays, total N, thousands, and percent of stays at system-affiliated hospitals						
Total, 47 States and the District of Columbia	33,437	92.3	3,008	66.6	30,429	94.8
Northeast						
New England*	1,458	95.7	82	79.2	1,376	96.7
Middle Atlantic	4,804	95.5	213	67.4	4,591	96.8
Midwest						
East North Central	5,308	93.1	573	71.1	4,735	95.8
West North Central	2,378	90.9	447	60.0	1,931	98.0
South						
South Atlantic	7,238	95.4	530	72.3	6,707	97.2
East South Central*	1,611	88.7	418	71.6	1,194	94.7
West South Central	3,940	89.6	397	57.9	3,543	93.2
West						
Mountain*	2,012	95.0	187	57.7	1,825	98.8
Pacific	4,689	85.3	161	62.1	4,527	86.1

Note: Includes community nonrehabilitation general acute care hospitals.

* Missing data from one State in the census division.

† N for hospital-level data is the number of hospitals; N for inpatient stay-level data is the number of stays, in thousands.
Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID) from 47 States and the District of Columbia (all except Alabama, Idaho, and New Hampshire) and AHRQ Compendium of U.S. Health Systems, 2016

- **A greater percentage of hospitals were system affiliated along the East Coast and in the western parts of the country than in the center of the country.**

  Across all hospitals, the percentage of hospitals that were system affiliated ranged from 57.5 percent of hospitals in the West South Central division to 85.6 percent of hospitals in the New England division. Generally, a greater percentage of hospitals were system affiliated along the East Coast in the New England, Middle Atlantic, and South Atlantic divisions (81.7–85.6 percent) and in the western parts of the country in the Mountain and Pacific divisions (65.7 and 70.5 percent, respectively) than in the center of the country in the West South Central and West North Central divisions (57.5 and 59.5 percent, respectively).

  Within rural and metro areas, the percentage of system-affiliated hospitals was as low as 35.8 percent in rural areas of the West South Central division and was 90 percent or more in metro areas of the New England, Middle Atlantic, South Atlantic, and Mountain divisions.

- **Overall, 95 percent or more of inpatient stays at hospitals in the New England, Middle Atlantic, South Atlantic, and Mountain divisions were at hospitals affiliated with a health system.**

  Overall, across all hospitals, the percentage of inpatient stays at health system-affiliated hospitals ranged from 85.3 percent of stays in the Pacific division to 95.0 percent or more of stays in the Northeast (New England and Middle Atlantic divisions), South Atlantic division, and Mountain division.

  Within rural and metro areas, the percentage of stays at health system-affiliated hospitals was 60 percent or lower for stays in rural areas of the Mountain (57.7 percent), West South Central (57.9 percent), and West North Central (60.0 percent) divisions and was as high as 98 percent or more for stays in metro areas of two of those same divisions: West North Central (98.0 percent) and Mountain (98.8 percent).

Characteristics and outcomes for inpatient stays at health system-affiliated and unaffiliated hospitals, 2016

Table 2 shows the percentage of inpatient stays at health system-affiliated and unaffiliated hospitals by select characteristics of the patient and inpatient stay, overall and by rural/metro location of the hospital.

Table 2. Characteristics of inpatient stays at health system-affiliated and unaffiliated hospitals in rural and metro areas, 2016

Characteristic	All hospitals		Rural hospitals		Metro hospitals	
	System affiliated	Unaffiliated	System affiliated	Unaffiliated	System affiliated	Unaffiliated
Inpatient stays, N	30,863,900	2,573,400	2,004,500	1,003,500	28,859,400	1,569,900
Service line, %						
Maternal/neonatal	22.5	24.3	22.1	23.5	22.5	24.8
Mental health	5.3	6.3	5.8	4.8	5.3	7.2
Injury	4.7	4.1	3.8	3.6	4.7	4.4
Surgical	20.9	14.4	14.0	11.8	21.4	16.0
General medical	46.6	51.0	54.3	56.3	46.1	47.5
Age group, years, %						
<1	11.5	12.3	11.3	12.0	11.5	12.5
1–17	2.6	2.0	1.6	1.8	2.6	2.1
18–44	24.7	24.6	22.3	21.7	24.9	26.4
45–64	25.1	23.4	23.1	21.1	25.2	24.9
65+	36.1	37.7	41.7	43.4	35.7	34.1
Sex, %						
Male	43.3	41.9	41.5	40.2	43.4	43.0
Female	56.7	58.0	58.4	59.7	56.6	56.9
Expected payer, %						
Medicare	40.2	41.1	47.2	47.7	39.7	36.8
Medicaid	22.3	27.5	21.9	21.2	22.4	31.5
Private insurance	30.3	23.5	23.4	24.5	30.7	22.9
Self-pay/No charge[a]	4.2	4.5	4.0	3.9	4.2	4.9
Other	2.9	3.3	3.4	2.5	2.9	3.7
Discharge disposition, %						
Routine	68.4	69.5	66.5	66.9	68.5	71.2
Short-term hospital	1.8	3.8	4.3	5.4	1.6	2.9
Other type of facility	14.2	14.4	15.5	16.1	14.1	13.3
Home health care	12.3	8.8	10.8	8.8	12.4	8.8
AMA	1.2	1.6	1.0	0.9	1.3	2.0
Died	1.9	1.8	1.8	1.8	2.0	1.8
Admitted through ED, %	52.0	50.2	49.3	42.6	52.2	55.1
Mean cost per stay, $	11,400	10,300	8,800	8,900	11,600	11,300

Abbreviation: AMA, against medical advice; ED, emergency department

Note: Includes stays at community nonrehabilitation general acute care hospitals. Number of stays and costs were rounded to the nearest hundred.

[a] Self-pay/No charge: includes self-pay, no charge, charity, and no expected payment.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID) from 47 States and the District of Columbia (all except Alabama, Idaho, and New Hampshire) and AHRQ Compendium of U.S. Health Systems, 2016

- **Surgical stays constituted a greater percentage of inpatient stays at health system-affiliated than at unaffiliated hospitals.**

  Across all hospitals, the percentage of surgical inpatient stays was 20.9 percent for health system-affiliated hospitals compared with 14.4 percent for stays at unaffiliated hospitals. This differential was observed for stays at rural hospitals (14.0 vs. 11.8 percent) and metro hospitals (21.4 vs. 16.0 percent, respectively).

  There were several other noteworthy differences with respect to service lines across community nonrehabilitation general acute care, nonspecialty hospitals. For rural hospitals, mental health stays constituted a greater percentage of inpatient stays at health system-affiliated than at unaffiliated hospitals (5.8 vs. 4.8 percent). Conversely, for metro hospitals, mental health stays constituted a smaller percentage of stays at system-affiliated than at unaffiliated hospitals (5.3 vs. 7.2 percent).

- **A greater percentage of stays at metro system-affiliated hospitals had an expected payer of private insurance than did stays at unaffiliated hospitals, which were more likely to have an expected payer of Medicaid.**

  At metro system-affiliated hospitals, 30.7 percent of stays had an expected payer of private insurance, compared with 22.9 percent of stays at unaffiliated hospitals in metro areas. At metro unaffiliated hospitals, 31.5 percent of stays had an expected payer of Medicaid, compared with 22.4 percent of stays at system-affiliated hospitals in metro areas. In contrast, the payer distribution was similar for system-affiliated and unaffiliated hospitals in rural areas.

- **Whereas a greater percentage of stays at system-affiliated hospitals were discharged to home health care, a greater percentage of stays at unaffiliated hospitals were discharged to short-term hospitals.**

  At both rural and metro hospitals, compared with stays at unaffiliated hospitals, a greater percentage of stays at system-affiliated hospitals were discharged to home health care (10.8 vs. 8.8 percent at rural hospitals; 12.4 vs. 8.8 percent at metro hospitals). In contrast, compared with stays at system-affiliated hospitals, a greater percentage of stays at unaffiliated hospitals were discharged to other short-term hospitals (i.e., transferred) (5.4 vs. 4.3 percent at rural hospitals; 2.9 vs. 1.6 percent at metro hospitals). Additionally, a greater percentage of stays at metro unaffiliated hospitals were discharged against medical advice compared with those at metro system-affiliated hospitals (2.0 vs. 1.3 percent).

  Finally, a greater percentage of stays at rural system-affiliated hospitals were admitted through the emergency department, compared with those at unaffiliated hospitals (49.3 vs. 42.6 percent).

- **For both rural and metro hospitals, the average cost per stay was similar across affiliation status.**

  For rural hospitals, on average, stays at health system-affiliated and unaffiliated hospitals cost $8,800 and $8,900 per stay, respectively. The average cost per stay was higher at metro than at rural hospitals, but among metro hospitals, costs were similar at health system-affiliated and unaffiliated hospitals ($11,600 and $11,300).

References

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[5] Furukawa MF, Machta RM, Barrett KA, Jones DJ, Shortell SM, Scanlon DP, et al. Landscape of health systems in the United States. Medical Care Research and Review. 2020;77(4):357–66.
[6] Agency for Healthcare Research and Quality. Compendium of U.S. Health Systems. 2016. www.ahrq.gov/chsp/data-resources/compendium.html. Accessed April 3, 2020.

About Statistical Briefs

Healthcare Cost and Utilization Project (HCUP) Statistical Briefs provide basic descriptive statistics on a variety of topics using HCUP administrative healthcare data. Topics include hospital inpatient, ambulatory surgery, and emergency department use and costs, quality of care, access to care, medical conditions, procedures, and patient populations, among other topics. The reports are intended to generate hypotheses that can be further explored in other research; the reports are not designed to answer in-depth research questions using multivariate methods.

Data Source

The estimates in this Statistical Brief are based upon data from the HCUP 2016 State Inpatient Databases (SID) for 47 States and the District of Columbia: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. Information on whether a hospital was affiliated with a health system came from the Agency for Healthcare Research and Quality's (AHRQ's) 2016 Compendium of U.S. Health Systems.[a] Only health systems in 47 States and the District of Columbia that included at least one community nonrehabilitation general acute care hospital and that linked to a hospital in the SID are included in this Brief; thus, the results may differ from those presented in other studies.[b]

Definitions

Case definition
A list of health systems and hospitals participating in those systems was obtained from the Agency for Healthcare Research and Quality's (AHRQ's) Compendium of U.S. Health Systems, which describes the working definition of a health system as "an organization that includes at least one hospital and at least one group of physicians that provides comprehensive care (including primary and specialty care) who are

[a] Agency for Healthcare Research and Quality. Compendium of U.S. Health Systems. 2016. www.ahrq.gov/chsp/data-resources/compendium.html. Accessed April 3, 2020.
[b] Furukawa MF, Machta RM, Barrett KA, Jones DJ, Shortell SM, Scanlon DP, et al. Landscape of health systems in the United States. Medical Care Research and Review. 2020;77(4):357–66.

connected with each other and with the hospital through common ownership or joint management." Further technical documentation from this data source is available elsewhere.[c,d]

Service line
Service line definitions are consistent with those defined by the HCUP documentation beginning in 2019.[e]

Types of hospitals included in HCUP State Inpatient Databases
This analysis used State Inpatient Databases (SID) limited to data from community general acute care hospitals, which are defined as short-term, non-Federal, general, and other hospitals, excluding hospital units of other institutions (e.g., prisons). Excluded for this analysis are community specialty hospitals such as obstetrics and gynecology, otolaryngology, orthopedic, cancer, pediatric, public, and academic medical center hospitals. Also excluded for this analysis are long-term care facilities such as rehabilitation, psychiatric, and alcoholism and chemical dependency hospitals. However, if a patient received long-term care, rehabilitation, or treatment for a psychiatric or chemical dependency condition in a community general acute care hospital, the discharge record for that stay was included in the analysis.

Unit of analysis
This Statistical Brief examines units of analysis as the health system, the hospital, and 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 1 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 & Medicaid Services (CMS).[f] *Costs* reflect the actual expenses incurred in the production of hospital services, such as wages, supplies, and utility costs; *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.

Hospital location
Hospital location is based on the rural-urban continuum codes (RUCC) for U.S. counties developed by the United States Department of Agriculture (USDA).[g] For this Statistical Brief, we collapsed the RUCC codes into the following two categories:

Metropolitan (metro) area:

- Counties in metro areas of 1 million population or more
- Counties in metro areas of 250,000 to 1 million population
- Counties in metro areas of fewer than 250,000 population

Rural area:

- Urban population of 20,000 or more, adjacent to a metro area
- Urban population of 2,500 to 19,999, adjacent to a metro area
- Completely rural or less than 2,500 urban population, adjacent to a metro area
- Urban population of 20,000 or more, not adjacent to a metro area

[c] Comparative Health System Performance Initiative: Compendium of U.S. Health Systems, 2016, Technical Documentation. January 2019. www.ahrq.gov/sites/default/files/wysiwyg/chsp/compendium/techdocrpt_0.pdf. Accessed April 3, 2020.
[d] Furukawa MF, Machta RM, Barrett KA, Jones DJ, Shortell SM, Scanlon DP, et al. Landscape of health systems in the United States. Medical Care Research Review. 2020;77(4):357–66.
[e] Agency for Healthcare Research and Quality. HCUP Central Distributor SID Description of Data Elements - All States. Healthcare Cost and Utilization Project (HCUP). August 2008. www.hcup-us.ahrq.gov/db/vars/siddistnote.jsp?var=i10_serviceline. Accessed September 22, 2020.
[f] Agency for Healthcare Research and Quality. HCUP Cost-to-Charge Ratio (CCR) Files. Healthcare Cost and Utilization Project (HCUP). 2001–2017. Agency for Healthcare Research and Quality. Updated December 2019. www.hcup-us.ahrq.gov/db/state/costtocharge.jsp. Accessed February 3, 2020.
[g] United States Department of Agriculture. Rural-Urban Continuum Codes. www.ers.usda.gov/data-products/rural-urban-continuum-codes/. Accessed February 27, 2020.

- Urban population of 2,500 to 19,999, not adjacent to a metro area
- Completely rural or less than 2,500 urban population, not adjacent to a metro area

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

- Medicare: includes fee-for-service and managed care Medicare
- Medicaid: includes fee-for-service and managed care Medicaid
- Private insurance: includes commercial nongovernmental payers, regardless of the type of plan (e.g., private health maintenance organizations [HMOs], preferred provider organizations [PPOs])
- Self-pay/No charge: includes self-pay, no charge, charity, and no expected payment
- Other payers: includes other Federal and local government programs (e.g., TRICARE, CHAMPVA, Indian Health Service, Black Lung, Title V) and Workers' Compensation

Hospital stays that were expected to be billed to the State Children's Health Insurance Program (SCHIP) may be classified as Medicaid or Other, depending on the structure of the State program. Because most State data do not identify SCHIP as a separate expected payer, it is not possible to present this information separately.

For this Statistical Brief, when more than one payer is listed for a hospital discharge, the first-listed payer is used.

Region and division
Region is one of the four regions defined by the U.S. Census Bureau. Division corresponds to the location of the hospital and is one of the nine divisions defined by the U.S. Census Bureau.

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

Admission source or point of origin
Admission source (now known as the patient's point of origin) indicates where the patient was located prior to admission to the hospital. Emergency admission indicates that the patient was admitted to the hospital through the emergency department.

Discharge status
Discharge status reflects 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

The Healthcare Cost and Utilization Project (HCUP, pronounced "H-Cup") is a family of healthcare databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, and private data organizations (HCUP Partners) and the Federal government to create a national information resource of encounter-level healthcare data. HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. These databases enable research on a broad range of health policy issues, including cost and quality of health services, medical practice patterns, access to healthcare programs, and outcomes of treatments at the national, State, and local market levels.

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

Alaska Department of Health and Social Services
Alaska State Hospital and 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
Delaware Division of Public Health
District of Columbia Hospital Association
Florida Agency for Health Care Administration
Georgia Hospital Association
Hawaii Laulima Data Alliance
Hawaii University of Hawai'i at Hilo
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
Maine Health Data Organization
Maryland Health Services Cost Review Commission
Massachusetts Center for Health Information and Analysis
Michigan Health & Hospital Association
Minnesota Hospital Association
Mississippi State Department of Health
Missouri Hospital Industry Data Institute
Montana Hospital Association
Nebraska Hospital Association
Nevada Department of Health and Human Services
New Hampshire Department of Health & Human Services
New Jersey Department of Health
New Mexico Department of Health
New York State Department of Health
North Carolina Department of Health and Human Services
North Dakota (data provided by the Minnesota Hospital Association)
Ohio Hospital Association
Oklahoma State Department of Health
Oregon Association of Hospitals and Health Systems
Oregon Office of Health Analytics
Pennsylvania Health Care Cost Containment Council
Rhode Island Department of Health
South Carolina Revenue and Fiscal Affairs Office
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 Department of Health and Human Resources, West Virginia Health Care Authority
Wisconsin Department of Health Services
Wyoming Hospital Association

About the SID

The HCUP State Inpatient Databases (SID) are hospital inpatient databases from data organizations participating in HCUP. The SID contain the universe of the inpatient discharge abstracts in the participating HCUP States, translated into a uniform format to facilitate multistate comparisons and analyses. Together, the SID encompass more than 95 percent of all U.S. community hospital discharges.

The SID can be used to investigate questions unique to one State, to compare data from two or more States, to conduct market-area variation analyses, and to identify State-specific trends in inpatient care utilization, access, charges, and outcomes.

For More Information

For other information on hospital characteristics of inpatient stays, including health system affiliation, refer to the HCUP Statistical Briefs located at www.hcup-us.ahrq.gov/reports/statbriefs/sb_hospcharacteristics.jsp.

For additional HCUP statistics, visit:

- HCUP Fast Stats at www.hcup-us.ahrq.gov/faststats/landing.jsp for easy access to the latest HCUP-based statistics for healthcare information topics
- HCUPnet, HCUP's interactive query system, at www.hcupnet.ahrq.gov/

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

For a detailed description of HCUP and more information on the design of the State Inpatient Databases (SID), please refer to the following database documentation:

Agency for Healthcare Research and Quality. Overview of the State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Rockville, MD: Agency for Healthcare Research and Quality. Updated November 2019. www.hcup-us.ahrq.gov/sidoverview.jsp. Accessed February 3, 2020.

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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 healthcare 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:

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