HEALTHCARE COST AND UTILIZATION PROJECT

Agency for Healthcare Research and Quality

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Costs of Pediatric Hospital Stays, 2016

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Introduction

Pediatric research advancements reduce childhood morbidity and mortality,[1,2] but improvements in pediatric health care do not come without costs. Among all hospital inpatient stays between 2008 and 2012, the average hospital cost of pediatric stays had the highest growth rate (more than 6 percent annually).[3] Furthermore, wide variation exists in the cost of pediatric hospital stays, which include many low-cost and routine uncomplicated births but also expensive stays for complicated births and nonbirth stays for rare conditions or treatments such as congenital anomalies and organ transplants.

This Healthcare Cost and Utilization Project (HCUP) Statistical Brief presents statistics on the cost of hospital inpatient stays among children aged 20 years and younger using the 2016 Kids' Inpatient Database (KID), which is the only nationwide database specifically developed to study hospitalizations among the pediatric population. In this Statistical Brief, we present the distribution of aggregate hospital costs and hospital stays in 2016 by type of stay (i.e., uncomplicated births, complicated births, and pediatric nonbirths) and by patient age. The average cost per stay and the distribution of stays are presented by expected payer. The volume of stays, average cost per stay, and aggregate costs are presented by diagnostic categories. All differences between estimates noted in the text are statistically significant at the .05 level or better. Differences between proportions noted in the text differ by at least 10 percent.

Highlights

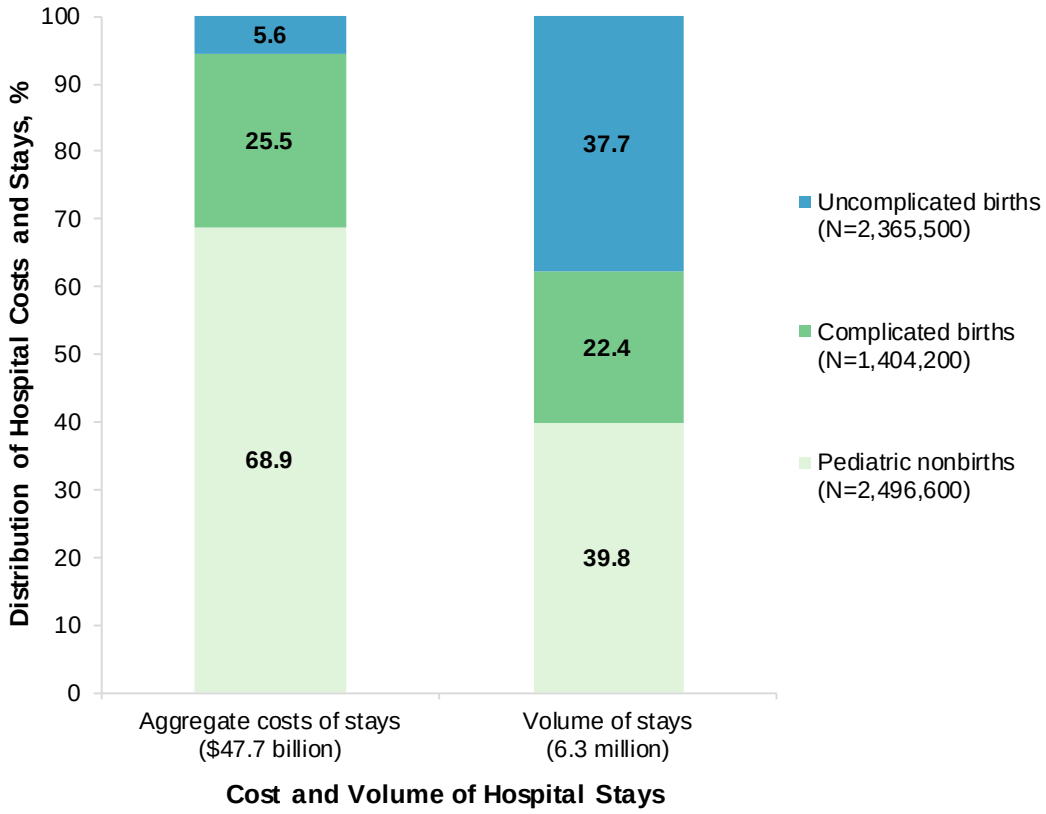
- Births represented about 30 percent of aggregate pediatric hospital costs in 2016 but about 60 percent of stays among children aged 0–20 years.
- In 2016, the average hospital cost for pediatric nonbirth stays was $13,400, compared with $8,900 for stays for complicated births and $1,200 for stays for uncomplicated births.
- Pediatric stays for the circulatory system had the highest average cost in 2016 ($56,300 per stay).
- In 2016, the average cost for stays for complicated births was higher for stays with an expected payer of Medicaid than of private insurance ($9,700 vs. $8,300 per stay). In contrast, the average cost for stays for pediatric nonbirths was lower for stays with an expected payer of Medicaid than of private insurance ($12,600 vs. $14,200 per stay). The average cost for stays for uncomplicated births was similar across expected payers.
- In 2016, pediatric hospital stays for extreme immaturity or respiratory distress syndrome had the highest aggregate costs ($6.5 billion), accounting for nearly 14 percent of all pediatric inpatient costs but less than 2 percent of pediatric stays.
- Stays for extracorporeal membrane oxygenation or tracheostomy with ventilator use greater than 96 hours (i.e., forms of life support) had the highest aggregate costs in 2016 among pediatric nonbirths ($1.94 billion). This represented 4 percent of all pediatric inpatient costs, but these types of stays totaled only 5,300 (0.1% of pediatric stays).

[1] Cheng TL, Bogue CW, Dover GJ. The next 7 great achievements in pediatric research. Pediatrics. 2017;139(5):e20163803.
[2] Cheng TL, Moneiro N, DiMeglio LA, Chien AT, Peeples ES, Raetz E, et al. Seven great achievements in pediatric research in the past 40 y. Pediatric Research. 2016;80(3):330–337.
[3] Moore B, Levit K, Elixhauser A. Costs for Hospital Stays in the United States, 2012. HCUP Statistical Brief #181. October 2014. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/reports/statbriefs/sb181-Hospital-Costs-United-States-2012.pdf.

Findings

Hospital costs and stays among children by type of stay, expected payer, and age, 2016
Figure 1 presents the distribution of aggregate hospital costs and total hospital stays among children for different types of inpatient hospitalizations (uncomplicated births, complicated births, and pediatric nonbirths) in 2016.

Figure 1. Distribution of aggregate hospital costs and stays among patients aged 0–20 years by type of stay, 2016



Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Kids' Inpatient Database (KID), 2016

- **Uncomplicated and complicated births together represented only about 30 percent of pediatric inpatient costs but 60 percent of all inpatient hospital stays among patients aged 0–20 years.**

  In 2016, hospital stays for uncomplicated births represented just 5.6 percent of aggregate costs for pediatric stays but 37.7 percent of all pediatric stays. Stays for complicated births represented 25.5 percent of aggregate costs and 22.4 percent of stays. Pediatric stays for nonbirths cost more than pediatric stays for births, representing 68.9 percent of aggregate costs versus 39.8 percent of pediatric hospital stays in 2016.

Table 1 shows the distribution of average hospital cost and total hospital stays overall and across different expected payers by type of pediatric stays in 2016.

Table 1. Average hospital cost per stay and distribution of stays by expected payer, 2016

Characteristic	Uncomplicated births	Complicated births	Pediatric nonbirths	All pediatric stays
Stays, N[a]	2,365,500	1,404,200	2,496,600	6,266,300
Average hospital cost, $[b]	1,200	8,900	13,400	7,800
Average hospital cost by expected payer, $[b]				
Medicare[c]	1,100	6,300	13,600	7,900
Medicaid	1,100	9,700	12,600	8,100
Private insurance	1,200	8,300	14,200	7,400
Self-pay/no charge[d]	1,100	4,100	10,700	4,900
Other	1,100	13,600	19,000	12,100
Stays by expected payer, %				
Medicare[c]	0.4	0.4	0.5	0.4
Medicaid	44.0	48.2	54.5	49.1
Private insurance	47.9	44.1	37.6	43.0
Self-pay/no charge[d]	4.8	4.4	3.3	4.1
Other	2.8	2.9	4.0	3.3

[a] The number of stays was rounded to the nearest 100.

[b] The average cost per stay was rounded to the nearest $100.

[c] The hospital stay for the newborn is covered through the mother at delivery if the mother is covered by Medicare. For more details, see *Expected Payer* in the Definitions section.

[d] 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), Kids' Inpatient Database (KID), 2016

- **The average hospital cost for inpatient stays for complicated births was over 7 times higher than the average cost for stays for uncomplicated births in 2016.**

  In 2016, the average hospital cost for uncomplicated births was $1,200, compared with $8,900 for stays for complicated births. The average hospital cost for pediatric nonbirth inpatient stays was $13,400.

- **In 2016, stays with Medicaid as the expected payer had a higher average cost for complicated births than did stays with private insurance, whereas stays with private insurance as the expected payer had a higher average cost for pediatric nonbirths than did stays with Medicaid.**

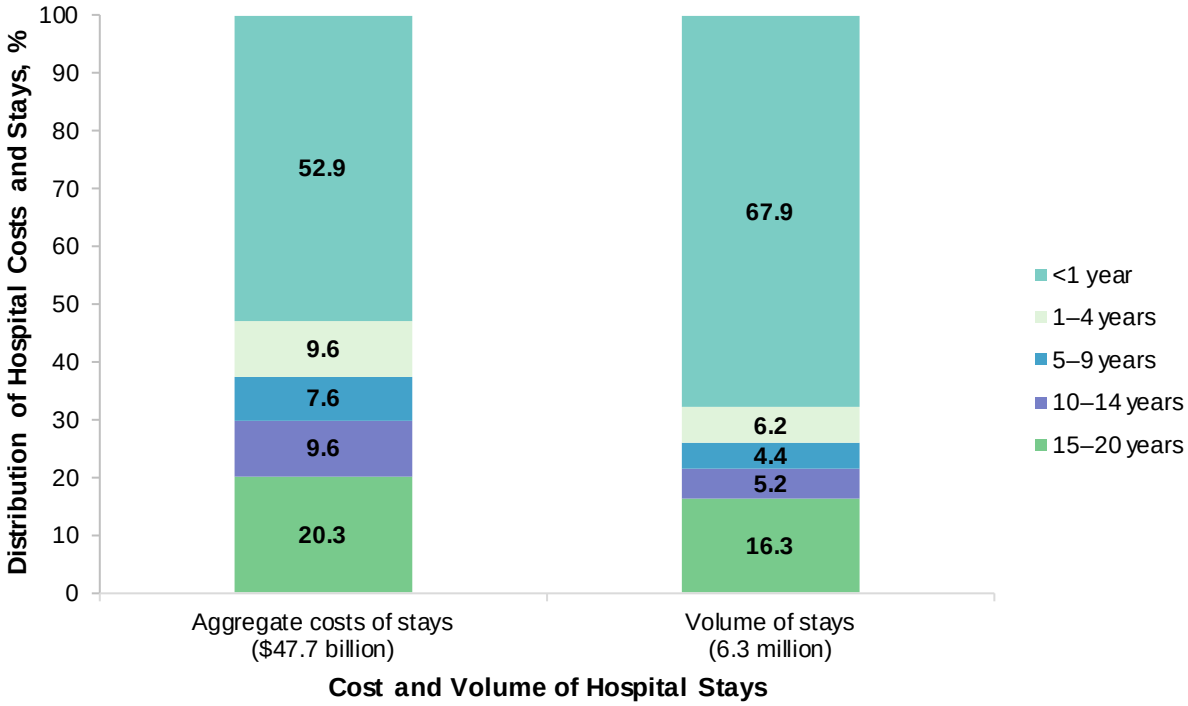
  The average hospital cost for uncomplicated births was approximately $1,100 to $1,200 per stay for all expected payers in 2016. Among stays for complicated births, the average cost per stay was higher when Medicaid was the expected payer than when private insurance was the expected payer ($9,700 vs. $8,300 per stay, respectively). Among stays for pediatric nonbirths, the average cost per stay was lower when Medicaid was the expected payer than when private insurance was the expected payer ($12,600 vs. $14,200 per stay, respectively).

- **In 2016, either Medicaid or private insurance was the expected payer for over 90 percent of all hospital stays among patients aged 0–20 years.**

  Medicaid was the expected payer for 49.1 percent of all pediatric stays, and private insurance was the expected payer for 43.0 percent of all pediatric stays. Medicaid was the largest expected payer for pediatric nonbirth stays and for complicated birth stays (54.5 percent and 48.2 percent, respectively). In contrast, private insurance was the largest expected payer for uncomplicated birth stays (47.9 percent).

Figure 2 shows aggregate hospital costs and total hospital stays among children for different age groups in 2016.

Figure 2. Distribution of aggregate hospital costs and stays among patients aged 0–20 years by age group, 2016



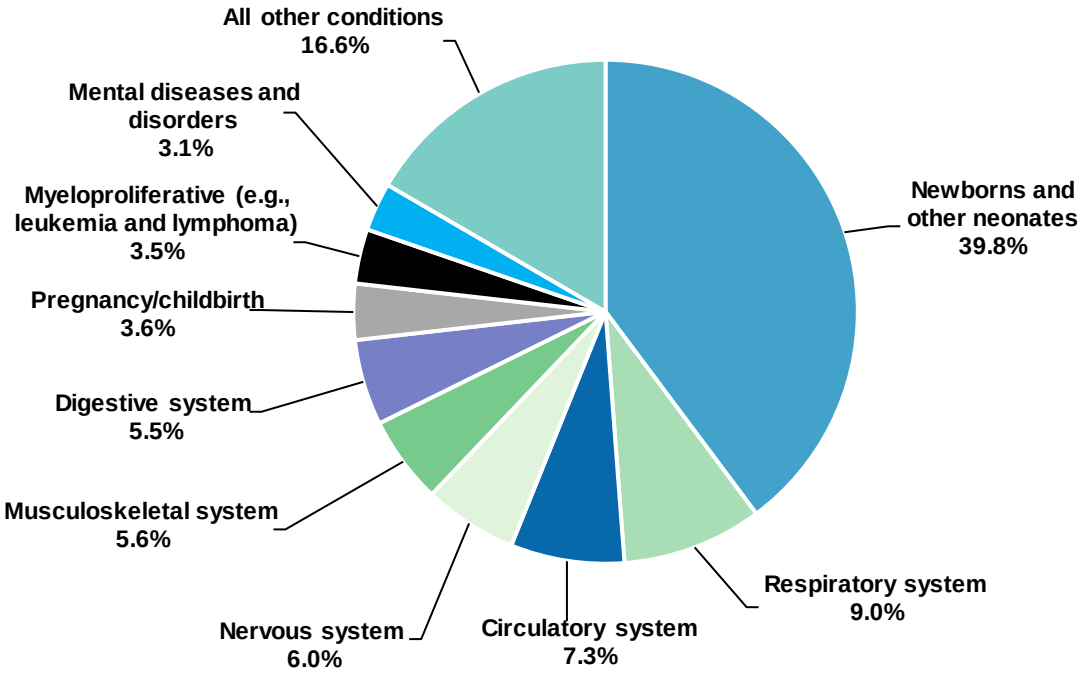
Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Kids' Inpatient Database (KID), 2016

- **Hospital stays among patients less than 1 year old represented 67.9 percent of pediatric stays, but only 52.9 percent of pediatric hospital costs in 2016.**

  Stays for patients aged less than 1 year represented 52.9 percent of aggregate hospital costs among pediatric stays but accounted for 67.9 percent of pediatric stays in 2016 (i.e., the share of aggregate costs was lower than the share of stays). For all other age groups, the share of aggregate costs was greater than the share of hospital stays.

Hospital costs and stays among children by diagnostic category, 2016
Figure 3 shows the distribution of aggregate hospital costs among pediatric stays by diagnostic category in 2016.

Figure 3. Distribution of aggregate hospital costs among pediatric stays by diagnostic category, 2016



Note: Diagnostic categories were defined by the major diagnostic category on the hospital discharge record. Categories included in the "all other conditions" category each contribute less than 3 percent to total aggregate hospital costs. These categories were alcohol and drug use; blood and blood forming organs; burns; ear, nose, mouth and throat; endocrine system; eye; factors influencing heath status; female reproductive system; hepatobiliary system; human immunodeficiency virus infections; infectious diseases; injuries and poisonings; kidney and urinary tract disorders; male reproductive system; multiple significant trauma; and skin and subcutaneous tissue.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Kids' Inpatient Database (KID), 2016

- **Forty percent of aggregate pediatric hospital costs were for stays for newborns and other neonatal conditions in 2016.**

  The top five diagnostic categories constituted 67.7 percent of aggregate hospital costs among pediatric stays in 2016:

  - Newborns and other neonates: 39.8 percent of aggregate pediatric costs
  - Respiratory system: 9.0 percent of aggregate pediatric costs
  - Circulatory system: 7.3 percent of aggregate pediatric costs
  - Nervous system: 6.0 percent of aggregate pediatric costs
  - Musculoskeletal system: 5.6 percent of aggregate pediatric costs

Table 2 presents the number of stays, average hospital cost per stay, and aggregate hospital costs among children by diagnostic category in 2016.

Table 2. Costs of hospital stays among patients aged 0–20 years by diagnostic category, 2016

Major Diagnostic Category	Aggregate costs, $ millions	Average cost per stay, $[a]	Stays, N[b]
All pediatric stays	**47,657**	**7,800**	**6,266,300**
Newborns and other neonates	18,983	5,000	3,823,600
Respiratory system	4,268	11,600	368,600
Circulatory system	3,497	56,300	62,100
Nervous system	2,880	16,800	171,800
Musculoskeletal system and connective tissue	2,660	21,200	125,700
Digestive system	2,637	12,600	209,000
Pregnancy, childbirth and the puerperium	1,738	4,600	375,200
Myeloproliferative (e.g., leukemia and lymphoma)	1,670	29,800	56,100
Mental diseases and disorders	1,499	5,900	252,200
Infectious and parasitic diseases	1,292	15,700	82,300
Endocrine, nutritional, and metabolic	1,047	9,000	116,000
Blood and blood forming organs	1,010	14,700	68,900
Ear, nose, mouth, and throat	809	9,100	88,600
Kidney and urinary tract	755	11,000	68,500
Injuries, poisonings, and toxic effects of drugs	674	10,300	65,200
Hepatobiliary system and pancreas	558	18,500	30,100
Multiple significant trauma	531	37,900	14,000
Skin, subcutaneous tissue, and breast	427	6,300	67,500
Factors influencing health status	194	9,900	19,700
Burns	192	22,000	8,800
Female reproductive system	100	8,700	11,600
Eye	91	11,600	7,900
Alcohol/drug use and induced mental disorders	50	4,800	10,500
Male reproductive system	38	9,100	4,100
Human immunodeficiency virus infections	7	19,500	400

[a] The average cost per stay was rounded to the nearest $100.

[b] The number of stays was rounded to the nearest 100.

Note: Diagnostic categories were defined by the major diagnostic category on the hospital discharge record.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Kids' Inpatient Database (KID), 2016

- **The most frequent diagnostic category among pediatric stays in 2016 was newborns and other neonates, which was 10 times more common than any other diagnostic category.**

  In 2016, newborn and neonatal stays accounted for 3,823,600 total stays—61.0 percent of all pediatric stays. The number of stays was the driving factor for this diagnostic category being ranked highest in aggregate costs in 2016. Pregnancy, childbirth and the puerperium, and the respiratory system, each accounted for about 6 percent of all pediatric stays.

- **Pediatric stays for a diagnosis of the circulatory system had the highest average cost per stay in 2016.**

  In 2016, the average cost per pediatric stay with a circulatory system diagnosis category was $56,300, more than 7 times higher than the average cost for all pediatric stays ($7,800 per stay). The average cost per stay was the driving factor for this diagnosis category being ranked third in

aggregate costs in 2016. The average cost was substantially higher for stays for multiple significant trauma and myeloproliferative (e.g., leukemia and lymphoma) than for the average pediatric stay ($37,900 and $29,800, respectively, vs. $7,800).

Table 3 presents average and aggregate hospital costs among children by diagnosis group in 2016. The 12 diagnosis groups with the highest aggregate costs in 2016 among patients aged 0–20 years are presented. Stays categorized as normal newborn or vaginal delivery without complicating diagnoses were also in the top diagnosis groups but were excluded from the table in order to highlight complicated stays.

Table 3. Average and aggregate costs of complicated hospital stays[4] among patients aged 0–20 years by diagnosis group, births versus nonbirths, 2016

Diagnosis group	Aggregate costs, $ millions	Average cost per stay, $[a]	Stays, N[b]
All pediatric stays	**47,657**	**7,800**	**6,266,300**
Births			
Extreme immaturity or respiratory distress syndrome	6,527	69,700	93,600
Full-term neonatal birth with major problems	2,384	10,700	223,300
Prematurity with major problems	2,329	26,700	87,400
Neonatal birth with other significant problems	1,688	2,000	845,300
Neonatal birth, died or transferred to another acute care facility	1,417	17,700	80,200
Prematurity without major problems	1,151	7,200	159,700
Nonbirths			
ECMO or tracheostomy with ventilator greater than 96 hours (i.e., a form of life support)	1,935	361,900	5,300
Psychoses	926	5,800	159,800
Other cardiothoracic procedures with MCC	640	124,300	5,100
Respiratory system diagnosis with ventilator greater than 96 hours	580	80,000	7,200
Allogeneic bone marrow transplant	503	291,400	1,700
Bronchitis and asthma with CC/MCC	500	7,500	66,800

Abbreviations: CC, complications or comorbidities; ECMO, extracorporeal membrane oxygenation; MCC, major complications or comorbidities

[a] The average cost per stay was rounded to the nearest $100.

[b] The number of stays was rounded to the nearest 100.

Note: Diagnosis groups were defined by the diagnosis-related group on the hospital discharge record. The "normal newborn" group (2,332,500 stays and $2.729 billion in aggregate costs) and "vaginal delivery without complicating diagnoses" group (220,100 stays and $834 million in aggregate costs) were excluded from the table in order to highlight complicated stays.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Kids' Inpatient Database (KID), 2016

- **Aggregate hospital costs for extreme immaturity or respiratory distress syndrome were more than double aggregate costs for any other condition.**

  Among the diagnosis groups with the highest aggregate pediatric hospital costs, half were for conditions where the majority of stays involved births and half were for nonbirth diagnosis groups. Aggregate costs in 2016 for extreme immaturity or respiratory distress syndrome were $6.53 billion, over 2.5 times that of a full-term neonatal birth with major problems ($2.38 billion in aggregate costs).

  Of the six pediatric conditions for which the majority of stays were not birth-related, extracorporeal membrane oxygenation (i.e., a form of life support) or tracheostomy with ventilator ($1.93 billion in

[4] Stays for "normal newborn" and "vaginal delivery without complicating diagnoses" were excluded from the table in order to highlight complicated stays.

aggregate costs), psychoses ($0.93 billion), and other cardiothoracic procedures with major complications or comorbidities ($0.64 billion) were the most expensive diagnosis groups.

About Statistical Briefs

Healthcare Cost and Utilization Project (HCUP) Statistical Briefs provide basic descriptive statistics on a variety of topics using HCUP administrative health care 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 Kids' Inpatient Database (KID).

Many hypothesis tests were conducted for this Statistical Brief. Thus, to decrease the number of false-positive results, we reduced the significance level to .05 for individual tests.

Definitions

ICD-10-CM/PCS, diagnosis-related groups (DRGs), major diagnostic categories (MDCs)
ICD-10-CM/PCS is the International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System. In October 2015, ICD-10-CM/PCS replaced the ICD-9-CM diagnosis and procedure coding system with the ICD-10-CM diagnosis coding system for most inpatient and outpatient medical encounters and the ICD-10-PCS procedure coding system for inpatient hospital procedures. There are over 70,000 ICD-10-CM diagnosis codes and there are over 75,000 ICD-10-PCS procedure codes.

DRGs comprise a patient classification system that categorizes patients into groups that are clinically coherent and homogeneous with respect to resource use. DRGs group patients according to diagnosis, type of treatment (procedure), age, and other relevant criteria. Each hospital stay has one assigned DRG.

MDCs assign ICD-10-CM principal diagnosis codes to 1 of 25 general diagnosis categories.

Case definition
For this report, the type of pediatric hospital stay was defined with the following variables available in the 2016 Kids' Inpatient Database (KID):

- Uncomplicated births: In-hospital birth[5] equal to 1 and uncomplicated birth[6] equal to 1
- Complicated births: In-hospital birth equal to 1 and uncomplicated birth not equal to 1
- Pediatric nonbirths: In-hospital birth not equal to 1

Types of hospitals included in the HCUP Kids' Inpatient Database
The Kids' Inpatient Database (KID) is based on data from community hospitals, which are defined as short-term, non-Federal, general, and other hospitals, excluding hospital units of other institutions (e.g., prisons). The KID includes obstetrics and gynecology, otolaryngology, orthopedic, cancer, pediatric, public, and academic medical hospitals. Excluded are long-term care facilities such as rehabilitation, psychiatric, and alcoholism and chemical dependency hospitals. However, if a patient received long-term

[5] KID Data element I10_HOSPBRTH indicates an in-hospital birth in HCUP data. In-hospital births are identified by the following two conditions: a principal or secondary diagnosis code indicating a live birth (Z38.00, Z38.01, Z38.2, Z38.30, Z38.31, Z38.5, Z38.61-Z38.69, Z38.8) and the patient is not born outside the hospital and not transferred from another acute care hospital or health care facility. Healthcare Cost and Utilization Project (HCUP). KID Description of Data Elements. September 2008. www.hcup-us.ahrq.gov/db/vars/i10_hospbrth/kidnote.jsp. Accessed April 1, 2019.
[6] KID Data element I10_UNCBRTH indicates an uncomplicated birth in HCUP data. Uncomplicated births are defined as an in-hospital birth for which the Medicare Severity Diagnosis Related Group equals 796 "Normal Newborn." Ibid.

care, rehabilitation, or treatment for a psychiatric or chemical dependency condition in a community hospital, the discharge record for that stay will be included in the KID.

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 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).[7] *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.

How HCUP estimates of costs differ from National Health Expenditure Accounts
There are a number of differences between the costs cited in this Statistical Brief and spending as measured in the National Health Expenditure Accounts (NHEA), which are produced annually by CMS.[8] The largest source of difference comes from the HCUP coverage of inpatient treatment only in contrast to the NHEA inclusion of outpatient costs associated with emergency departments and other hospital-based outpatient clinics and departments as well. The outpatient portion of hospitals' activities has been growing steadily and may exceed half of all hospital revenue in recent years. On the basis of the American Hospital Association Annual Survey, 2014 outpatient gross revenues (or charges) were about 46 percent of total hospital gross revenues.[9]

Smaller sources of differences come from the inclusion in the NHEA of hospitals that are excluded from HCUP. These include Federal hospitals (Department of Defense, Veterans Administration, Indian Health Services, and Department of Justice [prison] hospitals) as well as psychiatric, substance abuse, and long-term care hospitals. A third source of difference lies in the HCUP reliance on billed charges from hospitals to payers, adjusted to provide estimates of costs using hospital-wide cost-to-charge ratios, in contrast to the NHEA measurement of spending or revenue. HCUP costs estimate the amount of money required to produce hospital services, including expenses for wages, salaries, and benefits paid to staff as well as utilities, maintenance, and other similar expenses required to run a hospital. NHEA spending or revenue measures the amount of income received by the hospital for treatment and other services provided, including payments by insurers, patients, or government programs. The difference between revenues and costs include profit for for-profit hospitals or surpluses for nonprofit hospitals.

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

[7] Agency for Healthcare Research and Quality. HCUP Cost-to-Charge Ratio (CCR) Files. Healthcare Cost and Utilization Project (HCUP). 2001–2015. Agency for Healthcare Research and Quality. Updated September 2018. www.hcup-us.ahrq.gov/db/state/costtocharge.jsp. Accessed January 4, 2019.
[8] For additional information about the NHEA, see Centers for Medicare & Medicaid Services (CMS). National Health Expenditure Data. CMS Web site. Updated April 2018. www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html?redirect=/NationalHealthExpendData/. Accessed January 4, 2019.
[9] American Hospital Association. TrendWatch Chartbook, 2016. Table 4.2. Distribution of Inpatient vs. Outpatient Revenues, 1994–2014. www.aha.org/system/files/2018-01/2016-chartbook.pdf. Accessed January 4, 2019.

Hospital stays 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.

Reasonable and necessary services associated with pregnancy are covered and reimbursable under the Medicare program. Skilled medical management is appropriate throughout the events of pregnancy, beginning with diagnosis of the condition, continuing through delivery, and ending after the necessary postnatal care. Please see the Medicare Benefit Policy Manual (www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c01.pdf) for additional details.

About HCUP

The Healthcare Cost and Utilization Project (HCUP, pronounced "H-Cup") is a family of health care 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 health care 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 health care 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 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
Maine Health Data Organization
Maryland Health Services Cost Review Commission
Massachusetts Center for Health Information and Analysis
Michigan Health and 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 and 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 KID

The HCUP Kids' Inpatient Database (KID) is a nationwide database of hospital inpatient stays. The KID is the only dataset on hospital use, outcomes, and charges designed to study children's use of hospital services in the United States. The KID is a sample of discharges from all community, nonrehabilitation hospitals in States participating in HCUP. Pediatric discharges are defined as all discharges where the patient was aged 20 years or younger at admission. The KID's large sample size enables analyses of rare conditions (such as congenital anomalies) and uncommon treatments (such as organ transplantation). It can be used to study a wide range of topics including the economic burden of pediatric conditions, access to services, quality of care and patient safety, and the impact of health policy changes. The KID is produced every 3 years; prior databases are available for 1997, 2000, 2003, 2006, 2009, 2012, and 2016. Over time, the sampling frame for the KID has changed; thus, the number of States contributing to the KID varies from year to year. The KID is intended for national estimates only; no State-level estimates can be produced. The unweighted sample size for the 2016 KID is 3,117,413 (weighted, this represents 6,266,285 inpatient stays).

For More Information

For other information on pediatric hospital stays in the United States, refer to the HCUP Statistical Briefs located at www.hcup-us.ahrq.gov/reports/statbriefs/sb_pediatric.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 health care 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 Kids' Inpatient Database (KID), please refer to the following database documentation:

Agency for Healthcare Research and Quality. Overview of the Kids' Inpatient Database (KID). Healthcare Cost and Utilization Project (HCUP). Rockville, MD: Agency for Healthcare Research and Quality. Updated September 2018. www.hcup-us.ahrq.gov/kidoverview.jsp. Accessed January 4, 2019.

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