Overview of Major Ambulatory Surgeries Performed in Hospital-Owned Facilities, 2019

STATISTICAL BRIEF #287
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Introduction

The volume of ambulatory surgeries performed at U.S. community hospitals has grown consistently over the past quarter century, increasing from 13.4 million surgeries in 1995 to 19.2 million surgeries in 2018. Reflective of this growth, outpatient services accounted for 49 percent of community hospital revenue in 2018. Identifying the volume and characteristics of encounters for major ambulatory surgeries, as well as the most common ambulatory surgeries performed, can help provide baseline data for assessing the potential impacts over time of elective procedure deferrals, changes in reimbursement policy, and advances in medical technology.

This Healthcare Cost and Utilization Project (HCUP) Statistical Brief presents statistics on major ambulatory surgeries performed in hospital-owned facilities using weighted estimates from the 2019 Nationwide Ambulatory Surgery Sample (NASS). Major ambulatory surgeries are defined as select invasive, therapeutic surgical procedures that typically require the use of an operating room and regional anesthesia, general anesthesia, or sedation (i.e., surgeries flagged as “narrow” in the HCUP Surgery Flags Software). Procedures intended primarily for diagnostic purposes are excluded.

The rate of major ambulatory surgeries is provided by patient characteristics and hospital characteristics. Additionally, the most common all-listed major ambulatory surgeries are presented overall and by age-sex group, race and ethnicity, and primary expected payer. Because of the large sample size of the NASS data, small differences can be statistically significant. Thus, only differences greater than or equal to 10 percent are discussed in the text. Note that the NASS only includes community hospital-owned ambulatory surgery facilities.

Highlights

- In 2019, 11.9 million encounters for major ambulatory surgeries took place in hospital-owned facilities.
- Females, adults aged 65 years and older, White individuals, and people living in rural communities had the highest rates of encounters for major ambulatory surgeries.
- Most encounters involving major ambulatory surgeries took place at facilities owned by private, not-for-profit hospitals; teaching hospitals; and hospitals located in urban areas.
- Lens and cataract procedures accounted for 8 percent of all major ambulatory surgeries and represented the most common surgery overall, for those aged 65+ years, for all races and ethnicities except Hispanic, and for patients with Medicare as the expected payer.
- Seven of the top 20 ambulatory surgery categories were related to the musculoskeletal system and accounted for 22 percent of all major ambulatory surgeries.
- Tonsillectomy and/or adenoidectomy, as well as myringotomy were the most common major ambulatory surgeries among children.
- Hernia repair was among the top major ambulatory surgeries for all adult male age groups, whereas obstetric/gynecological surgeries were among the most common major ambulatory surgeries for younger adult females.
Findings

*Encounters for major ambulatory surgeries performed in hospital-owned facilities, by patient and hospital characteristics, 2019*

Figure 1 presents the rate of encounters for major ambulatory surgeries by select patient characteristics.

**Figure 1. Population rate of encounters for major ambulatory surgeries performed in hospital-owned facilities by patient characteristic, 2019**

In 2019, 11.9 million encounters for major ambulatory surgeries occurred in hospital-owned facilities.

There were 11,880,500 major ambulatory surgeries in 2019—a rate of 36.1 per 1,000 population.
Females, adults aged 65 years and older, non-Hispanic White individuals, and people living in rural communities had the highest rates of major ambulatory surgery encounters in 2019.

In 2019, the rate of major ambulatory surgery encounters was higher for females than for males (39.7 vs. 32.3 per 1,000 population) and generally increased with age: 16.2–23.5 per 1,000 population for those younger than 45 years, 46.6 per 1,000 for those aged 45–64 years, and 72.3–75.6 per 1,000 for those aged 65 years and older.

Among racial and ethnic groups, non-Hispanic White and non-Hispanic Other individuals had the highest rates of encounters for major ambulatory surgeries (42.6 and 41.2 per 1,000 population, respectively). In contrast, the rate was lowest among Asian/Pacific Islander and Hispanic individuals (16.5 and 20.6 per 1,000 population, respectively).

Those living in rural communities had a higher rate of major ambulatory surgery encounters than those living in metropolitan communities: 50.9 versus 30.1–36.8 per 1,000 population.

Table 1 presents the number and distribution of encounters for major ambulatory surgeries by select hospital characteristics in 2019.

### Table 1. Encounters for major ambulatory surgeries performed in hospital-owned facilities by hospital characteristic, 2019

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Encounters for major ambulatory surgeries</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Overall</td>
<td>11,880,500</td>
<td>100.0</td>
</tr>
<tr>
<td>Bed size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small (0–99 beds)</td>
<td>2,023,900</td>
<td>17.0</td>
</tr>
<tr>
<td>Medium (100–299 beds)</td>
<td>3,915,300</td>
<td>33.0</td>
</tr>
<tr>
<td>Large (300+ beds)</td>
<td>5,941,200</td>
<td>50.0</td>
</tr>
<tr>
<td>Ownership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>1,419,800</td>
<td>12.0</td>
</tr>
<tr>
<td>Private, not-for-profit</td>
<td>8,997,500</td>
<td>75.7</td>
</tr>
<tr>
<td>Private, investor-owned</td>
<td>1,463,200</td>
<td>12.3</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>10,431,300</td>
<td>87.8</td>
</tr>
<tr>
<td>Rural</td>
<td>1,449,200</td>
<td>12.2</td>
</tr>
<tr>
<td>Teaching status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>8,541,400</td>
<td>71.9</td>
</tr>
<tr>
<td>Nonteaching</td>
<td>3,339,100</td>
<td>28.1</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>2,051,900</td>
<td>17.3</td>
</tr>
<tr>
<td>Midwest</td>
<td>3,064,300</td>
<td>25.8</td>
</tr>
<tr>
<td>South</td>
<td>4,332,300</td>
<td>36.5</td>
</tr>
<tr>
<td>West</td>
<td>2,431,900</td>
<td>20.5</td>
</tr>
</tbody>
</table>

Notes: Number of encounters is rounded to the nearest hundred. Percentages are calculated from unrounded values. Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Nationwide Ambulatory Surgery Sample (NASS), 2019

In 2019, most encounters involving major ambulatory surgeries took place at facilities owned by private, not-for-profit hospitals; teaching hospitals; and hospitals in urban areas.

Facilities owned by private, not-for-profit hospitals accounted for more than three-fourths of major ambulatory surgery encounters, whereas private, investor-owned and public facilities each accounted for 12 percent.

Nearly 90 percent of major ambulatory surgery encounters took place in facilities owned by urban hospitals, and more than 70 percent occurred in those owned by teaching hospitals.
Most common major ambulatory surgeries performed in hospital-owned facilities, 2019

Table 2 presents the most frequent major ambulatory surgeries in 2019 by Clinical Classifications Software for Services and Procedures (CCS-Services and Procedures) category. Statistics are provided for total major ambulatory surgeries (counting each surgery performed, including those occurring for the same encounter) and encounters involving one or more major ambulatory surgery. The totals and percentages for surgeries and encounters are distinct because an encounter can involve multiple surgeries in the same surgery category. Also, because an encounter can involve multiple surgeries across different CCS-Services and Procedures categories, the encounter totals for each of the top 20 surgeries are not necessarily mutually exclusive.

Table 2. Top 20 major ambulatory surgeries performed in hospital-owned facilities, 2019

<table>
<thead>
<tr>
<th>Rank</th>
<th>CCS-Services and Procedures category</th>
<th>Total major ambulatory surgeries</th>
<th>Encounters involving one or more major ambulatory surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>1</td>
<td>Lens and cataract procedures</td>
<td>1,235,400</td>
<td>7.9</td>
</tr>
<tr>
<td>2</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>1,158,600</td>
<td>7.4</td>
</tr>
<tr>
<td>3</td>
<td>Cholecystectomy and common duct exploration</td>
<td>643,200</td>
<td>4.1</td>
</tr>
<tr>
<td>4</td>
<td>Other (select) operating room therapeutic procedures on joints*</td>
<td>594,500</td>
<td>3.8</td>
</tr>
<tr>
<td>5</td>
<td>Other (select) operating room therapeutic procedures on nose, mouth and pharynx*</td>
<td>537,800</td>
<td>3.4</td>
</tr>
<tr>
<td>6</td>
<td>Other (select) operating room therapeutic procedures on skin and breast*</td>
<td>537,700</td>
<td>3.4</td>
</tr>
<tr>
<td>7</td>
<td>Inguinal and femoral hernia repair</td>
<td>494,900</td>
<td>3.2</td>
</tr>
<tr>
<td>8</td>
<td>Hernia repair other than inguinal and femoral</td>
<td>470,500</td>
<td>3.0</td>
</tr>
<tr>
<td>9</td>
<td>Tonsillectomy and/or adenoidectomy</td>
<td>460,400</td>
<td>2.9</td>
</tr>
<tr>
<td>10</td>
<td>Decompression of the peripheral nerve</td>
<td>449,200</td>
<td>2.9</td>
</tr>
<tr>
<td>11</td>
<td>Excision of semilunar cartilage (meniscus) of knee</td>
<td>433,500</td>
<td>2.8</td>
</tr>
<tr>
<td>12</td>
<td>Hysterectomy, abdominal and vaginal</td>
<td>419,000</td>
<td>2.7</td>
</tr>
<tr>
<td>13</td>
<td>Myringotomy</td>
<td>371,900</td>
<td>2.4</td>
</tr>
<tr>
<td>14</td>
<td>Lumpectomy, quadrantectomy of breast</td>
<td>347,500</td>
<td>2.2</td>
</tr>
<tr>
<td>15</td>
<td>Other (select) operating room therapeutic procedures on bone*</td>
<td>334,500</td>
<td>2.1</td>
</tr>
<tr>
<td>16</td>
<td>Arthroplasty knee</td>
<td>317,800</td>
<td>2.0</td>
</tr>
<tr>
<td>17</td>
<td>Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/defibrillator</td>
<td>310,200</td>
<td>2.0</td>
</tr>
<tr>
<td>18</td>
<td>Appendectomy</td>
<td>308,500</td>
<td>2.0</td>
</tr>
<tr>
<td>19</td>
<td>Partial excision bone</td>
<td>307,100</td>
<td>2.0</td>
</tr>
<tr>
<td>20</td>
<td>Laminectomy, excision intervertebral disc</td>
<td>296,200</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Top 20 major ambulatory surgeries: 10,028,500 (64.0%) involving one or more major ambulatory surgery.

All major ambulatory surgeries: 15,669,400 (100.0%) involving one or more major ambulatory surgery.

Abbreviation: CCS-Services and Procedures, Clinical Classifications Software for Services and Procedures

Notes: Numbers of procedures and encounters are rounded to the nearest hundred. Percentages are calculated from unrounded values. Procedures are grouped using the Healthcare Cost and Utilization Project (HCUP) CCS-Services and Procedures. Note that a single encounter could involve more than one surgery, and the same encounter may be included in the encounter totals for more than one surgery grouping.

* See Appendix for example surgeries included in this CCS-Services and Procedures category.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Nationwide Ambulatory Surgery Sample (NASS), 2019
The top 20 major ambulatory surgery categories accounted for 64 percent of all major ambulatory surgeries and 68 percent of all encounters involving major ambulatory surgeries.

In 2019, 11.9 million encounters represented a total of 15.7 million major ambulatory surgeries. The top 20 major ambulatory surgery categories constituted 10.0 million surgeries (64 percent of all major ambulatory surgeries) and accounted for 8.1 million major ambulatory surgery encounters (68 percent of all major ambulatory surgery encounters).

Lens and cataract procedures represented 8 percent of all major ambulatory surgeries in 2019.

Out of all CCS-Services and Procedures categories, the lens and cataract procedures category was the most common, constituting 8 percent of all major ambulatory surgeries.

Other (select) therapeutic procedures on muscles and tendons (e.g., arthroscopic rotator cuff repair and tendon sheath incision for trigger finger) was the second most common major ambulatory surgery category. This category along with six other categories related to the musculoskeletal system accounted for 22 percent of all major ambulatory surgeries. The other six categories are other (select) operating room therapeutic procedures on joints (e.g., arthroscopy procedures to treat joint disorders); excision (i.e., partial removal) of semilunar cartilage, or meniscus, of the knee; other (select) operating room therapeutic procedures on bone (e.g., removal of a deep implant, such as a buried screw, wire, or plate); knee arthroplasty (i.e., reconstruction or replacement); partial excision bone; and laminectomy, excision of intervertebral disc.

The top 20 categories also included 4 major ambulatory surgeries related to diseases of the gastrointestinal system: cholecystectomy (i.e., removal of gallbladder) and common duct exploration, inguinal and femoral (i.e., thigh and groin) hernia repair, hernia repair other than inguinal and femoral, and appendectomy. Combined, these surgeries constituted 12 percent of major ambulatory surgeries.

Tables 3–5 present the most common major ambulatory surgeries by select patient characteristics: age-sex group (Table 3), patient race and ethnicity (Table 4), and primary expected payer (Table 5). Major ambulatory surgery totals count each surgery performed, including multiple surgeries within or across CCS-Services and Procedures categories that occurred during the same encounter.

Table 3 presents the most common major ambulatory surgeries by age-sex group in 2019.
Table 3. Most frequent major ambulatory surgeries performed in hospital-owned facilities by age-sex group, 2019

<table>
<thead>
<tr>
<th>Rank</th>
<th>CCS-Services and Procedures category</th>
<th>Number of major ambulatory surgeries</th>
<th>Rate per 1,000 population</th>
<th>Rank</th>
<th>CCS-Services and Procedures category</th>
<th>Number of major ambulatory surgeries</th>
<th>Rate per 1,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 0–17 years</td>
<td>Tonsillectomy and/or adenoidecstomy</td>
<td>201,300</td>
<td>5.3</td>
<td>1</td>
<td>Tonsillectomy and/or adenoidecstomy</td>
<td>175,700</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>Myringotomy</td>
<td>201,300</td>
<td>5.3</td>
<td>2</td>
<td>Myringotomy</td>
<td>138,500</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>Other (select) operating room therapeutic procs on male genital*</td>
<td>98,700</td>
<td>2.6</td>
<td>3</td>
<td>Appendectomy</td>
<td>30,700</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Appendectomy</td>
<td>45,100</td>
<td>1.2</td>
<td>4</td>
<td>Other (select) operating room therapeutic procs on nose, mouth and pharynx*</td>
<td>28,400</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Other (select) operating room therapeutic procs on nose, mouth and pharynx*</td>
<td>37,100</td>
<td>1.0</td>
<td>5</td>
<td>Other (select) operating room therapeutic procs on bone*</td>
<td>27,700</td>
<td>0.8</td>
</tr>
<tr>
<td>Ages 18–44 years</td>
<td>Other (select) therapeutic procs on muscles and tendons*</td>
<td>117,900</td>
<td>2.0</td>
<td>1</td>
<td>Cholecystectomy and common duct exploration</td>
<td>225,400</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>Other (select) operating room therapeutic procs on joints*</td>
<td>102,300</td>
<td>1.7</td>
<td>2</td>
<td>Hysterectomy, abdominal and vaginal</td>
<td>175,400</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Other (select) operating room therapeutic procs on nose, mouth and pharynx*</td>
<td>92,900</td>
<td>1.6</td>
<td>3</td>
<td>Other (select) operating room therapeutic procs on skin and breast*</td>
<td>158,900</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Appendectomy</td>
<td>75,000</td>
<td>1.3</td>
<td>4</td>
<td>Other (select) operating room therapeutic procs, female organs*</td>
<td>144,900</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Inguinal and femoral hernia repair</td>
<td>73,500</td>
<td>1.2</td>
<td>5</td>
<td>Oophorectomy, unilateral and bilateral</td>
<td>131,400</td>
<td>2.3</td>
</tr>
<tr>
<td>Ages 45–64 years</td>
<td>Other (select) therapeutic procs on muscles and tendons*</td>
<td>268,800</td>
<td>6.5</td>
<td>1</td>
<td>Other (select) therapeutic procs on muscles and tendons*</td>
<td>281,700</td>
<td>6.5</td>
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<tr>
<td></td>
<td>Inguinal and femoral hernia repair</td>
<td>169,300</td>
<td>4.1</td>
<td>2</td>
<td>Other (select) operating room therapeutic procs on skin and breast*</td>
<td>232,900</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>Hernia repair other than inguinal and femoral</td>
<td>126,900</td>
<td>3.1</td>
<td>3</td>
<td>Hysterectomy, abdominal and vaginal</td>
<td>189,100</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Other (select) operating room therapeutic procs on joints*</td>
<td>118,300</td>
<td>2.9</td>
<td>4</td>
<td>Cholecystectomy, common duct exploration</td>
<td>157,200</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>Lens and cataract procs</td>
<td>111,900</td>
<td>2.7</td>
<td>5</td>
<td>Lens and cataract procs</td>
<td>148,500</td>
<td>3.4</td>
</tr>
<tr>
<td>Ages 65+ years</td>
<td>Lens and cataract procs</td>
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<td>16.5</td>
<td>1</td>
<td>Lens and cataract procs</td>
<td>563,000</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>Inguinal and femoral hernia repair</td>
<td>169,700</td>
<td>7.1</td>
<td>2</td>
<td>Other (select) therapeutic procs on muscles and tendons*</td>
<td>173,300</td>
<td>5.8</td>
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<tr>
<td></td>
<td>Other (select) therapeutic procs on muscles and tendons*</td>
<td>160,800</td>
<td>6.8</td>
<td>3</td>
<td>Lumpectomy, quadrantectomy of breast</td>
<td>133,100</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>Cardiac pacemaker or cardioverter/defibrillator procs</td>
<td>145,700</td>
<td>6.1</td>
<td>4</td>
<td>Arthroplasty knee</td>
<td>114,100</td>
<td>3.8</td>
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<tr>
<td></td>
<td>Other (select) operating room procs on vessels other than head and neck*</td>
<td>98,800</td>
<td>4.2</td>
<td>5</td>
<td>Other (select) therapeutic procedures, hemic and lymphatic system*</td>
<td>97,100</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Abbreviations: CCS-Services and Procedures, Clinical Classifications Software for Services and Procedures; procs, procedures
Notes: Number of procedures is rounded to the nearest hundred. Rates are calculated from unrounded values. Procedures are grouped using the Healthcare Cost and Utilization Project (HCUP) CCS-Services and Procedures.
* See Appendix for example surgeries included in this CCS-Services and Procedures category.
Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Nationwide Ambulatory Surgery Sample (NASS), 2019
The rate of major ambulatory surgeries was higher for male than female children but higher for females aged 18–44 and 45–64 years than males in these age groups.

Among children, the rate of major ambulatory surgeries was higher for males than females (25.4 vs. 18.7 per 1,000 population). In contrast, the rate for females was higher than males among those aged 18–44 years (39.7 vs. 22.6) and 45–64 years (72.7 vs. 53.4). The rates for males and females aged 65+ years were similar (97.3 and 92.1 per 1,000 population, respectively).

Tonsillectomy and/or adenoidectomy and myringotomy were the most common major ambulatory surgeries among children.

Tonsillectomy and/or adenoidectomy (i.e., removal of the adenoid glands), myringotomy (i.e., incision into the ear drum to relieve pressure), appendectomy, and other (select) operating room therapeutic procedures on nose, mouth, and pharynx (e.g., maxillary antrostomy to clear the sinus opening) were among the top five major ambulatory surgery categories for both male and female children. In the case of tonsillectomy and/or adenoidectomy, the rate was similar for both sexes (5.3 and 4.9 per 1,000 males and females, respectively). For the other three surgery categories, the rate was higher for males than females (e.g., for myringotomy, 5.3 per 1,000 males vs. 3.8 per 1,000 females).

Hernia repair was among the top major ambulatory surgeries for all adult male age groups, whereas obstetric/gynecological surgeries were among the most common major ambulatory surgeries for younger adult females.

Inguinal and femoral hernia repair was one of the five most common major ambulatory surgery categories among males aged 18+ years. Hernia repair other than inguinal and femoral also ranked among the top procedures for males aged 45–64 years.

Three obstetric/gynecological surgery categories ranked in the top five for females aged 18–44 years: hysterectomy (i.e., removal of the uterus), other (select) operating room therapeutic procedures on the female organs (e.g., laparoscopic surgery to remove endometrial implants and scar tissue), and oophorectomy (i.e., removal of one or both ovaries). Hysterectomy was also a common major ambulatory surgery for females aged 45–64 years.

Three of the top five major ambulatory surgeries for patients aged 65+ years were distinct for males and females.

Among those aged 65+ years, three surgeries—inguinal and femoral hernia repair, cardiac pacemaker or cardioverter/defibrillator procedures, and other (select) procedures on vessels other than head and neck (e.g., endovascular procedures to treat peripheral vascular disease)—ranked among the top five surgery categories for men but not women. In contrast, lumpectomy, quadrantectomy of breast (i.e., removal of cancerous tissue without removing the entire breast); knee arthroplasty; and other (select) therapeutic procedures on the hemic and lymphatic system (e.g., excision of deep axillary lymph nodes) ranked in the top five surgery categories for women but not men.
Table 4 presents the most common major ambulatory surgeries by patient race and ethnicity in 2019.

### Table 4. Most frequent major ambulatory surgeries performed in hospital-owned facilities by patient race and ethnicity, 2019

<table>
<thead>
<tr>
<th>Race and ethnicity, rank</th>
<th>CCS-Services and Procedures category</th>
<th>Number of major ambulatory surgeries</th>
<th>Rate per 1,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asian/Pacific Islander</strong></td>
<td>[Data]</td>
<td>407,200</td>
<td>21.1</td>
</tr>
<tr>
<td>1</td>
<td>Lens and cataract procedures</td>
<td>47,100</td>
<td>2.4</td>
</tr>
<tr>
<td>2</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>21,800</td>
<td>1.1</td>
</tr>
<tr>
<td>3</td>
<td>Other (select) operating room therapeutic procedures on nose, mouth and pharynx*</td>
<td>18,300</td>
<td>0.9</td>
</tr>
<tr>
<td>4</td>
<td>Lumpectomy, quadrantectomy of breast</td>
<td>16,400</td>
<td>0.8</td>
</tr>
<tr>
<td>5</td>
<td>Cholecystectomy and common duct exploration</td>
<td>16,100</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Non-Hispanic Black</strong></td>
<td>[Data]</td>
<td>1,404,000</td>
<td>34.3</td>
</tr>
<tr>
<td>1</td>
<td>Lens and cataract procedures</td>
<td>105,500</td>
<td>2.6</td>
</tr>
<tr>
<td>2</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>103,600</td>
<td>2.5</td>
</tr>
<tr>
<td>3</td>
<td>Other (select) operating room therapeutic procedures on skin and breast*</td>
<td>55,300</td>
<td>1.4</td>
</tr>
<tr>
<td>4</td>
<td>Other (select) operating room therapeutic procedures on joints*</td>
<td>50,600</td>
<td>1.2</td>
</tr>
<tr>
<td>5</td>
<td>Creation, revision and removal of arteriovenous fistula or vessel-to-vessel cannula for dialysis</td>
<td>49,000</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td>[Data]</td>
<td>1,599,400</td>
<td>26.4</td>
</tr>
<tr>
<td>1</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>108,000</td>
<td>1.8</td>
</tr>
<tr>
<td>2</td>
<td>Cholecystectomy and common duct exploration</td>
<td>104,400</td>
<td>1.7</td>
</tr>
<tr>
<td>3</td>
<td>Lens and cataract procedures</td>
<td>92,100</td>
<td>1.5</td>
</tr>
<tr>
<td>4</td>
<td>Tonsillectomy and/or adenoidectomy</td>
<td>65,100</td>
<td>1.1</td>
</tr>
<tr>
<td>5</td>
<td>Other (select) operating room therapeutic procedures on skin and breast*</td>
<td>56,700</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Non-Hispanic White</strong></td>
<td>[Data]</td>
<td>11,109,400</td>
<td>56.2</td>
</tr>
<tr>
<td>1</td>
<td>Lens and cataract procedures</td>
<td>910,000</td>
<td>4.6</td>
</tr>
<tr>
<td>2</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>849,200</td>
<td>4.3</td>
</tr>
<tr>
<td>3</td>
<td>Other (select) operating room therapeutic procedures on joints*</td>
<td>444,700</td>
<td>2.3</td>
</tr>
<tr>
<td>4</td>
<td>Cholecystectomy and common duct exploration</td>
<td>440,300</td>
<td>2.2</td>
</tr>
<tr>
<td>5</td>
<td>Other (select) operating room therapeutic procedures on nose, mouth and pharynx*</td>
<td>382,500</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Non-Hispanic Other†</strong></td>
<td>[Data]</td>
<td>584,700</td>
<td>54.3</td>
</tr>
<tr>
<td>1</td>
<td>Lens and cataract procedures</td>
<td>50,800</td>
<td>4.7</td>
</tr>
<tr>
<td>2</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>38,600</td>
<td>3.6</td>
</tr>
<tr>
<td>3</td>
<td>Other (select) operating room therapeutic procedures on nose, mouth and pharynx*</td>
<td>26,000</td>
<td>2.4</td>
</tr>
<tr>
<td>4</td>
<td>Tonsillectomy and/or adenoidectomy</td>
<td>25,400</td>
<td>2.4</td>
</tr>
<tr>
<td>5</td>
<td>Cholecystectomy and common duct exploration</td>
<td>22,900</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Abbreviation: CCS-Services and Procedures, Clinical Classifications Software for Services and Procedures

Notes: Number of procedures is rounded to the nearest hundred. Rates are calculated from unrounded values. Procedures are grouped using the Healthcare Cost and Utilization Project (HCUP) CCS-Services and Procedures.

* See Appendix for example surgeries included in this CCS-Services and Procedures category.

† Other NH includes American Indian/Alaska Native and other non-Hispanic individuals.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), Nationwide Ambulatory Surgery Sample (NASS), 2019
- **Lens and cataract procedures and other (select) therapeutic procedures on muscles and tendons ranked in the top five major ambulatory surgery categories across all races and ethnicities.**

  Lens and cataract procedures ranked as the third most common major ambulatory surgery category among Hispanic individuals and the most common major ambulatory surgery category among individuals of all other races and ethnicities. The highest rates of lens and cataract procedures were observed among non-Hispanic White and non-Hispanic Other individuals (4.6–4.7 per 1,000 population), followed by non-Hispanic Black and Asian/Pacific Islander individuals (2.4–2.6) and Hispanic individuals (1.5).

  Other (select) therapeutic procedures on muscles and tendons was one of the top two major ambulatory surgery categories across all races and ethnicities, with the highest rate observed among non-Hispanic White individuals (4.3 per 1,000 population) and the lowest rate observed among Asian/Pacific Islander individuals (1.1 per 1,000 population).

  Cholecystectomy and common duct exploration was a top five major ambulatory surgery category among all races and ethnicities except for non-Hispanic Black. Non-Hispanic White, Hispanic, and non-Hispanic Other individuals had higher population rates compared with Asian/Pacific Islander individuals (1.7–2.2 vs. 0.8 per 1,000 population).

- **Other (select) operating room therapeutic procedures on the nose, mouth, and pharynx was one of the most common major ambulatory surgery categories among Asian/Pacific Islander, non-Hispanic White, and non-Hispanic Other individuals.**

  Other (select) operating room therapeutic procedures on the nose, mouth, and pharynx (e.g., maxillary antrostomy to clear the sinus opening) ranked in the top five major ambulatory surgeries for all races and ethnicities except for non-Hispanic Black and Hispanic. In contrast, other (select) operating room therapeutic procedures on skin and breast (e.g., reduction mammoplasty or breast reduction) was among the top five surgery categories for non-Hispanic Black and Hispanic patients only.

  Several other major ambulatory surgery categories ranked in the top five for only one or two races and ethnicities: other (select) operating room therapeutic procedures on joints (non-Hispanic White and non-Hispanic Black); tonsillectomy and/or adenoidectomy (Hispanic and non-Hispanic Other); creation, revision, and removal of arteriovenous fistula or vessel-to-vessel cannula for dialysis (non-Hispanic Black); and lumpectomy, quadrantectomy of breast (Asian/Pacific Islander).
Table 5 presents the most common major ambulatory surgeries by primary expected payer in 2019.

### Table 5. Most frequent major ambulatory surgeries performed in hospital-owned facilities by primary expected payer, 2019

<table>
<thead>
<tr>
<th>Primary expected payer, rank</th>
<th>CCS-Services and Procedures category</th>
<th>Number of major ambulatory surgeries</th>
<th>Percent of major ambulatory surgeries among primary expected payer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Lens and cataract procedures</td>
<td>843,400</td>
<td>17.0</td>
</tr>
<tr>
<td>2</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>342,000</td>
<td>6.9</td>
</tr>
<tr>
<td>3</td>
<td>Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/defibrillator</td>
<td>227,800</td>
<td>4.6</td>
</tr>
<tr>
<td>4</td>
<td>Other (select) operating room procedures on vessels other than head and neck*</td>
<td>186,400</td>
<td>3.7</td>
</tr>
<tr>
<td>5</td>
<td>Arthroplasty knee</td>
<td>181,600</td>
<td>3.7</td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
<td>2,113,100</td>
<td>100.0</td>
</tr>
<tr>
<td>1</td>
<td>Tonsillectomy and/or adenoidectomy</td>
<td>188,700</td>
<td>8.9</td>
</tr>
<tr>
<td>2</td>
<td>Myringotomy</td>
<td>148,400</td>
<td>7.0</td>
</tr>
<tr>
<td>3</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>133,800</td>
<td>6.3</td>
</tr>
<tr>
<td>4</td>
<td>Cholecystectomy and common duct exploration</td>
<td>104,300</td>
<td>4.9</td>
</tr>
<tr>
<td>5</td>
<td>Other (select) operating room therapeutic procedures on nose, mouth and pharynx*</td>
<td>75,100</td>
<td>3.6</td>
</tr>
<tr>
<td>Private insurance</td>
<td></td>
<td>7,379,500</td>
<td>100.0</td>
</tr>
<tr>
<td>1</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>555,400</td>
<td>7.5</td>
</tr>
<tr>
<td>2</td>
<td>Cholecystectomy and common duct exploration</td>
<td>358,100</td>
<td>4.9</td>
</tr>
<tr>
<td>3</td>
<td>Other (select) operating room therapeutic procedures on nose, mouth and pharynx*</td>
<td>332,800</td>
<td>4.5</td>
</tr>
<tr>
<td>4</td>
<td>Other (select) operating room therapeutic procedures on joints*</td>
<td>323,900</td>
<td>4.4</td>
</tr>
<tr>
<td>5</td>
<td>Hysterectomy, abdominal and vaginal</td>
<td>287,600</td>
<td>3.9</td>
</tr>
<tr>
<td>Self-pay/No Charge †</td>
<td></td>
<td>465,300</td>
<td>100.0</td>
</tr>
<tr>
<td>1</td>
<td>Other (select) operating room therapeutic procedures on skin and breast*</td>
<td>105,200</td>
<td>22.6</td>
</tr>
<tr>
<td>2</td>
<td>Cholecystectomy and common duct exploration</td>
<td>31,300</td>
<td>6.7</td>
</tr>
<tr>
<td>3</td>
<td>Appendectomy</td>
<td>28,200</td>
<td>6.1</td>
</tr>
<tr>
<td>4</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>23,500</td>
<td>5.0</td>
</tr>
<tr>
<td>5</td>
<td>Lens and cataract procedures</td>
<td>16,300</td>
<td>3.5</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>713,800</td>
<td>100.0</td>
</tr>
<tr>
<td>1</td>
<td>Other (select) therapeutic procedures on muscles and tendons*</td>
<td>101,900</td>
<td>14.3</td>
</tr>
<tr>
<td>2</td>
<td>Other (select) operating room therapeutic procedures on joints*</td>
<td>66,200</td>
<td>9.3</td>
</tr>
<tr>
<td>3</td>
<td>Excision of semilunar cartilage of knee</td>
<td>37,800</td>
<td>5.3</td>
</tr>
<tr>
<td>4</td>
<td>Decompression peripheral nerve</td>
<td>28,200</td>
<td>3.9</td>
</tr>
<tr>
<td>5</td>
<td>Partial excision bone</td>
<td>26,400</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Abbreviation: CCS-Services and Procedures, Clinical Classifications Software for Services and Procedures

Notes: Number of procedures is rounded to the nearest hundred. Percentages are calculated from unrounded values. Procedures are grouped using the Healthcare Cost and Utilization Project (HCUP) CCS-Services and Procedures. Percentages are provided because there is currently no data source for national population insurance estimates that align with HCUP’s definition of expected primary payer.

* See Appendix for example surgeries included in this CCS-Services and Procedures category.

† 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), Nationwide Ambulatory Surgery Sample (NASS), 2019
Other (select) therapeutic procedures on muscles and tendons ranked in the top five major ambulatory surgery categories across all primary expected payers.

Other (select) therapeutic procedures on muscles and tendons accounted for 5–8 percent of major ambulatory surgeries with an expected payer of Medicare, Medicaid, private insurance, and self-pay/no charge, as well as for nearly 15 percent of major ambulatory surgeries with other primary expected payers.

Other (select) operating room therapeutic procedures on skin and breast accounted for more than 20 percent of major ambulatory surgeries with an expected payer of self-pay/no charge.

Several top major ambulatory surgery categories were unique to specific expected payer types:

- Medicare: cardiac pacemaker or cardioverter/defibrillator procedures, other (select) operating room procedures on vessels other than head and neck, and knee arthroplasty
- Medicaid: myringotomy, and tonsillectomy and/or adenoidectomy
- Private insurance: hysterectomy
- Self-pay/No charge: other (select) operating room therapeutic procedures on skin and breast and appendectomy
Appendix. Example surgeries by Clinical Classifications Software for Services and Procedures category

In some cases, Clinical Classifications Software for Services and Procedures (CCS-Services and Procedures) category labels reflect a broad range of surgeries (e.g., Other therapeutic procedures on muscles and tendons). This appendix provides a description of some of the most common surgeries within the nonspecific CCS-Services and Procedures categories included in this report (i.e., categories identified as “Other” in the CCS-Services and Procedures software).

<table>
<thead>
<tr>
<th>CCS-Services and Procedures category</th>
<th>Example surgeries</th>
</tr>
</thead>
</table>
| Other (select) operating room therapeutic procedures on nose, mouth and pharynx (CCS-Services and Procedures 33) | • Turbinate reduction procedures to reduce nasal blockage or treat sleep apnea  
• Sinus procedures |
| Other (select) operating room procedures on vessels other than head and neck (CCS-Services and Procedures 61) | • Endovascular procedures (e.g., revascularization with angioplasty and/or stent placement) to treat peripheral vascular disease  
• Placement or retrieval of inferior vena cava filter |
| Other (select) therapeutic procedures, hemic and lymphatic system (CCS-Services and Procedures 67) | • Excision (i.e., partial removal) of deep axillary lymph nodes for treatment of breast cancer  
• Laparoscopic pelvic lymph node dissection (e.g., removal for treatment of gynecologic cancer) |
| Other (select) operating room therapeutic procedures, male genital (CCS-Services and Procedures 118) | • Repositioning of an undescended testicle into the scrotum (orchiopexy) or removal of a testicle (orchiectomy)  
• Removal of an abnormal collection of fluid around the testes (excision of hydrocele) |
| Other (select) operating room therapeutic procedures, female organs (CCS-Services and Procedures 132) | • Laparoscopic surgery with fulguration (i.e., destruction using heat from an electric current) or excision of endometrial implants and scar tissue for treatment of pelvic pain  
• Laparoscopic colpopexy (i.e., suspension of vaginal apex) for treatment of pelvic organ prolapse |
| Other (select) therapeutic procedures on muscles and tendons (CCS-Services and Procedures 160) | • Arthroscopic rotator cuff repair  
• Tendon sheath incision for trigger finger |
| Other (select) operating room therapeutic procedures on bone (CCS-Services and Procedures 161) | • Removal of a deep implant, such as a buried screw, wire, or plate  
• Metatarsal osteotomy (i.e., cutting of bone) to treat foot deformity |
| Other (select) operating room therapeutic procedures on joints (CCS-Services and Procedures 162) | • Arthroscopy for diagnosis and treatment of joint disorders  
• Fusion (arthrodesis) of joints in the feet (e.g., toes, midfoot, and ankle) |
| Other (select) operating room therapeutic procedures on skin and breast (CCS-Services and Procedures 175) | • Breast reconstruction and reduction procedures  
• Tissue graft procedures (e.g., fat grafting) |

Abbreviation: CCS-Services and Procedures, Clinical Classifications Software for Services and Procedures
References


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 Nationwide Ambulatory Surgery Sample (NASS). Supplemental sources include population denominator data for use with HCUP databases, derived from information available from Claritas, a vendor that produces population estimates and projections based on data from the U.S. Census Bureau. a

Definitions


All-listed procedures include all procedures performed during the hospital stay or outpatient visit, whether for definitive treatment or for diagnostic or exploratory purposes.

CPT assigns numeric codes to procedures. There are approximately 9,600 CPT procedure codes.

The CCS-Services and Procedures provides a method for classifying CPT and Healthcare Common Procedure Coding System (HCPCS) Level II codes into clinically meaningful procedure categories. b More than 10,000 CPT codes and 6,000 HCPCS Level II codes are collapsed into over 240 categories that may be more useful for presenting descriptive statistics than are individual CPT or HCPCS Level II codes.

Encounters included in the HCUP Nationwide Ambulatory Surgery Sample

The 2019 Nationwide Ambulatory Surgery Sample (NASS) is limited to encounters with at least one in-scope ambulatory surgery on the record performed at a hospital-owned facility. In-scope procedures are defined as major surgeries (invasive, therapeutic procedures that typically require the use of an operating room and regional anesthesia, general anesthesia, or sedation, flagged as “narrow” surgeries in the HCUP Surgery Flags Software) that belong to a subset of CCS-Services and Procedures categories. To be considered in scope for the 2019 NASS, a CCS-Services and Procedures category must (1) have a

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relatively high major ambulatory surgery volume or aggregate charge total in the State Ambulatory Surgery and Services Databases (SASD) and State Emergency Department Databases (SEDD) and (2) show evidence of reliable reporting from hospitals in the SASD and SEDD.\(^d\)

**Types of hospitals included in the HCUP Nationwide Ambulatory Surgery Sample**
The NASS is based on data from hospital-owned ambulatory surgery facilities. The designation of a facility as *hospital-owned* is specific to its financial relationship with a hospital that provides inpatient care and is not related to its physical location. Ambulatory surgery performed in hospital-owned facilities may be performed within the hospital, in a facility attached to the hospital, or in a facility physically separated from the hospital. The NASS is further limited to ambulatory surgeries performed at facilities owned by community hospitals. Community hospitals are defined as short-term, non-Federal, general, and other specialty hospitals, excluding hospital units of other institutions (e.g., prisons). Rehabilitation and long-term acute care hospitals are excluded.

**Unit of analysis**
The unit of analysis is the ambulatory surgery or ambulatory surgery encounter, not a person or patient. This means that a person who has multiple ambulatory surgery encounters in 1 year will be counted each time as a separate encounter. If a person has multiple ambulatory surgeries performed during the same encounter or during multiple encounters, the surgeries are counted as separate and unique surgeries.

**Population rates**
Rates of ambulatory surgeries (or ambulatory surgery encounters) per 1,000 population were calculated using 2019 surgery totals (or encounter totals) in the numerator and Claritas\(^a\) estimates of the 2019 U.S. population in the denominator. Individuals with multiple surgeries or encounters are counted more than once in the numerator.

\[
\text{Population rate of surgeries/encounters} = \left( \frac{\text{number of surgeries/encounters among patients in group}}{\text{number of U.S. residents in group}} \right) \times 100,000
\]

**Hospital location**
The classification of whether a hospital is in a metropolitan area (*urban*) or nonmetropolitan area (*rural*) is assigned from the American Hospital Association (AHA) Annual Survey and is based on the Core Based Statistical Area (CBSA) definition of rurality developed by the Office of Management and Budget (OMB). Hospitals located in counties with a CBSA type of “Division” or “Metropolitan” were considered urban, and hospitals with a CBSA type of “Rural” or “Micropolitan” were classified as rural. This Statistical Brief used the CBSA classification released in 2014, which was based on the 2010 Census.

**Location of patients’ residence**
Place of residence is based on the urban-rural classification scheme for U.S. counties developed by the National Center for Health Statistics (NCHS) and based on the OMB definition of a metropolitan service area as including a city and a population of at least 50,000 residents:

- Large Central Metropolitan: Counties in a metropolitan area with 1 million or more residents that satisfy at least one of the following criteria: (1) containing the entire population of the largest principal city of the metropolitan statistical area (MSA), (2) having their entire population contained within the largest principal city of the MSA, or (3) containing at least 250,000 residents of any principal city in the MSA
- Large Fringe Metropolitan: Counties in a metropolitan area with 1 million or more residents that do not qualify as large central metropolitan counties
- Medium Metropolitan: Counties in a metropolitan area of 250,000–999,999 residents
- Small Metropolitan: Counties in a metropolitan area of 50,000–249,999 residents
- Micropolitan: Counties in a nonmetropolitan area of 10,000–49,999 residents
- Noncore: Counties in a nonmetropolitan and nonmicropolitan area


For this Statistical Brief, we combined the medium and small metropolitan categories and the micropolitan and noncore categories.

**Community-level income**
Community-level income is based on the median household income of the patient’s ZIP Code of residence. Quartiles are defined so that the total U.S. population is evenly distributed. The value ranges for the income quartiles vary by year. The income quartile is missing for patients who are homeless or foreign.

**Expected payer**
To make coding uniform across all HCUP data sources, the primary expected payer for the ambulatory surgery encounter 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

Ambulatory surgery encounters that were expected to be billed to the State Children’s Health Insurance Program (SCHIP) are included under Medicaid.

For this Statistical Brief, when more than one payer is listed for an ambulatory surgery encounter, the first-listed payer is used.

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

- 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

**Hospital characteristics**
Data on hospital ownership and status as a teaching hospital were obtained from the AHA Annual Survey of Hospitals. Hospital ownership/control includes categories for government nonfederal (public), private not-for-profit (voluntary), and private investor-owned (proprietary). Teaching hospital is defined as having a residency program approved by the Accreditation Council for Graduate Medical Education, being a member of the Council of Teaching Hospitals, or having a ratio of full-time equivalent interns and residents to beds of 0.25 or higher.

**Reporting of race and ethnicity**
Data on Hispanic ethnicity are collected differently among the States and also can differ from the census methodology of collecting information on race (White, Black, Asian/Pacific Islander, American Indian/Alaska Native, Other [including mixed race]) separately from ethnicity (Hispanic, non-Hispanic). State data organizations often collect Hispanic ethnicity as one of several categories that include race. Therefore, for multistate analyses, HCUP creates the combined categorization of race and ethnicity for data from States that report ethnicity separately. When a State data organization collects Hispanic ethnicity separately from race, HCUP uses Hispanic ethnicity to override any other race category to
create a Hispanic category for the uniformly coded race and ethnicity data element, while also retaining the original race and ethnicity data. This Statistical Brief reports race and ethnicity for the following categories: Hispanic, non-Hispanic White, non-Hispanic Black, Asian/Pacific Islander, and non-Hispanic Other (American Indian/Alaska Native, Other).

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 NASS

The HCUP Nationwide Ambulatory Surgery Sample (NASS) is a nationwide database of encounters for major ambulatory surgeries performed in hospital-owned facilities. The NASS is constructed using records from the HCUP State Ambulatory Surgery and Services Databases (SASD). The 2019 NASS also includes records from the HCUP State Emergency Department Databases (SEDD). Major ambulatory surgeries are defined as select invasive, therapeutic surgical procedures that typically require the use of an operating room and regional anesthesia, general anesthesia, or sedation. (These surgeries are flagged as "narrow" in the HCUP Surgery Flags Software.1) Procedures intended primarily for diagnostic purposes are excluded. As the largest all-payer ambulatory surgery database in the United States, the NASS facilitates research on a variety of topics, including quality of and access to ambulatory surgery care, the impact of health policy changes, and utilization of ambulatory surgery services by specific populations. The NASS is produced annually beginning with data year 2016. The number of States contributing to the NASS varies from year to year. The NASS is intended for national estimates only; no State-level estimates can be produced. Unweighted, the 2019 NASS contains approximately 9.0 million major ambulatory surgery encounters (weighted, this represents 11.9 million major ambulatory surgery encounters).

For More Information

For other information on procedures, refer to the HCUP Statistical Briefs located at www.hcup-us.ahrq.gov/reports/statbriefs/sb_procedures.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/
- HCUP Summary Trend Tables at www.hcup-us.ahrq.gov/reports/trendtables/summarytrendtables.jsp for monthly information on hospital utilization

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 Nationwide Ambulatory Surgery Sample (NASS), please refer to the following database documentation:


Suggested Citation


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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of 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 email us at hcup@ahrq.gov or send a letter to the address below:

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