Facts and Figures: Inpatient Hospitalizations in Oklahoma, 2006
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HIGHLIGHTS
This publication includes information extracted from the Oklahoma hospital inpatient discharge database. Inpatient records used in the development of this report represent discharges for all Oklahoma resident patients treated in-hospital during calendar year 2006 at state-licensed short-term acute care hospitals. Inpatient care provided by federal (i.e., Veterans Affairs), tribal (i.e., Indian Health Service), psychiatric and substance abuse facilities is not reflected by the data in this report.

Overall hospital statistics
• For 2006, there were 137 acute care hospitals submitting discharge data to the Oklahoma State Department of Health.

• There were a total of 510,542 hospitalizations in those reporting hospitals

• The average charge per hospital stay was $15,726 with the aggregate charges for all stays totaling approximately $8 billion.

• The average length of stay was 4.8 days and nearly 2.5 million total days of care in 2006.

• There were approximately 143 hospitalizations per 1,000 population in Oklahoma.

• Routine (54 percent) and emergency department (39 percent) admissions accounted for the bulk of all hospital admissions.

• Nearly 3 in 4 (73 percent) hospital admissions experienced a routine discharge.

• Medicare and Medicaid accounted for the payment of over 60 percent of all hospital stays.

Children
• Roughly 1 in 6 Oklahoma hospitalizations were to children under the age of 18 years.

• Hospital stays for pregnancy, childbirth, or infants accounted for 21 percent of all hospitalizations.

• Ninety-six percent of infant discharges were classified as newborn infants.

• Cesarean section (C-section) deliveries made up 35 percent of all childbirth admissions.

• Pneumonia (8.2 percent) was the leading principal diagnosis for children ages 1-17 years.

• Among children ages 1-17 years, Mood disorders (depression and bipolar disorders) were the second leading reason for hospitalization.

Young adults and middle age
• Individuals 18-64 years of age accounted for 47 percent of all hospital stays.
• Among adults aged 18-44 years, childbirth-related conditions were the leading reasons for hospitalizations.

• Cardiovascular conditions were the most common principal diagnosis for adults aged 45-64 years old.

• Half of all discharges for alcoholism were to middle age patients aged 45-64 years.

**Elderly**

• Thirty-six percent of hospital discharges were to patients 65 years and older.

• There were 599 hospital stays for every 1,000 elderly individuals 85 years and older.

• Pneumonia (6.3 percent) and rehabilitative care (6.1 percent) were the top two reasons for hospitalization among the elderly.

• Nearly 5 in 10 (47 percent) of diabetes-related hospital stays were to Oklahoma adults aged 64 and older.

**Specific diagnoses and procedures**

• Coronary atherosclerosis had the highest aggregate costs for hospital stays at $201 million, representing 5.6 percent of all hospital costs.

• Men had nearly 3 times as many alcohol-related hospital stays as did women and while only 6 percent of all hospital stays were uninsured more than 33 percent of alcohol-related hospital stays were not covered by a health care plan.

• Hospital admissions for spinal cord injuries had the highest average charge per hospital stay ($109,243 per stay).

• There were more than 25,000 hospital stays for which a blood transfusion was administered, representing 4.6 percent of all discharges.

• Admissions to hospital for developmental disorders experienced the longest average length of stay (41 days) with average charges of $32,000 per stay.

**Cardiovascular conditions and procedures**

• Circulatory conditions accounted for nearly 16 percent of all hospital stays. These conditions included coronary atherosclerosis, congestive heart failure, heart attack, and irregular heart beat.

• Five of the top 20 most costly conditions were cardiac-related diseases, including coronary atherosclerosis, congestive heart failure, heart attack, irregular heart beat, and stroke.

• The distribution of circulatory disease discharges was evenly split by gender; however, males and females did differ in the specific conditions for which they were hospitalized.
• Percutaneous transluminal coronary angioplasty (PTCA) had the highest volume of use among all cardiovascular procedures, accounting for 66 percent or 11,664 procedures.

Diabetes
• Hospital admissions for diabetes accounted for 23 percent of all hospital stays.
• The overwhelming majoring of diabetes hospitalizations occurred to those aged 45 and older.

Mental health
• Mental illness or substance abuse was the principal diagnosis for 24,257 hospital stays in 2006.
• Mood disorders (depression and bipolar conditions) were the leading reason for mental health-related hospitalization for persons under 65 years of age.

Injuries
• There were 25,162 hospital stays for treatment of injuries and the average length of stay for these cases was 4.9 days.
• Hip fracture was the most common type of injury making up 17 percent of injury-related hospital stays.

• Spinal cord injuries had the highest associated costs ($34,600), the longest average length of stay (18.2 days), and the highest in-hospital death rate (8.2 percent).

Musculoskeletal conditions and orthopedic procedures
• Spinal fusion was the leading orthopedic procedure performed on patients aged 18-64 years. For those aged 18-44 years undergoing an orthopedic surgery, 24 percent was for a spinal fusion. For those aged 45-64 years, the comparable percentage was 21 percent.
• For the elderly aged 85 and older who had a procedure, 36 percent received treatment for a hip fracture.
INTRODUCTION

Quality hospital discharge data are essential to the improvement in the quality of care provided by Oklahoma hospitals. These data can be used by diverse groups to obtain the necessary information to evaluate treatment and surgical outcomes, to quantify the number of diagnoses and procedures of a certain type, to monitor trends in hospital admissions, and to inform patients regarding the performance of hospitals in the provision of health care services. The primary purpose of this document is to report hospital-based health statistics and, by doing so, support the improvement of health care through the use of objective, understandable data on inpatient stays at Oklahoma hospitals.

The Health Care Information Division (HCI), Center for Health Statistics (CHS) is responsible for collecting, processing, and disseminating hospital health care data for the state’s public health agency, the Oklahoma State Department of Health (OSDH). The Oklahoma Health Care Information Act compuls Oklahoma state-licensed hospitals and ambulatory surgery centers to submit a uniform set of data characterizing patient discharges occurring in those facilities. The HCI discharge program collects three types of administrative data: 1) in-patient discharges from hospitals, 2) outpatient surgery discharges from hospitals, and 3) outpatient surgery discharges from free-standing ambulatory surgery centers. For this report, only inpatient hospital discharges for calendar year 2006 were used.

Oklahoma inpatient hospital discharge data include patient demographics, diagnoses, procedures, discharge status, and hospital charges. From these elements and those from other sources (e.g., U.S. Census Bureau, Centers for Medicare and Medicaid, and the Agency for Healthcare Research and Quality), it is possible to derive information relative to the quality, expenditure, and volume of services utilized to provide care to Oklahoma residents. This information can then be used in the development of public health programs and health policy to yield improved outcomes in Oklahoma population health.

This report provides an overview of hospitalizations in Oklahoma for 2006. Along with a brief summary of characteristics of hospitals and demographics for inpatient stays (Section 1), hospital discharges are examined by the most frequently occurring diagnoses and procedures (Section 2 and 3, respectively). Basic hospital charges for Oklahoma hospital stays are set out in Section 4. Lastly, Section 5 gives some simple figures on uninsured hospital admissions. Facts and Figures: Inpatient Hospitalizations in Oklahoma, 2006 is intended for anyone interested in understanding and improving the health care services provided by Oklahoma hospitals.

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1 63 O.S. (Supp. 1994) §1-115 et seq.
SECTION 1

OVERVIEW STATISTICS FOR INPATIENT HOSPITAL STAYS

EXHIBIT 1.1  Hospital Stays, Charges and Length of Stay
EXHIBIT 1.2  Reasons for Hospital Stays
EXHIBIT 1.3  Admission Source
EXHIBIT 1.4  Discharge Status
EXHIBIT 1.5  Patient Age
EXHIBIT 1.6  Expected Primary Payer
EXHIBIT 1.1 Hospital Stays, Charges and Length of Stay

<table>
<thead>
<tr>
<th>Number of discharges, charges, and length of stay, 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total discharges</td>
</tr>
<tr>
<td>Discharges per 1,000 population</td>
</tr>
<tr>
<td>Average charge per stay</td>
</tr>
<tr>
<td>Aggregate charges in millions</td>
</tr>
<tr>
<td>Average length of stay in days</td>
</tr>
<tr>
<td>Total days of care</td>
</tr>
<tr>
<td>Average hospital charge per day</td>
</tr>
</tbody>
</table>

EXHIBIT 1.2 Reasons for Hospital Stays

For year 2006, there were approximately a half million discharges from Oklahoma’s acute care medical facilities.

- There were approximately 143 discharges per 1,000 population.
- The average charge for a hospital stay was $15,726 with the sum of all charges amounting to more than $8 billion.
- The average length of stay for acute care hospitals was 4.8 days with the average daily charge equaling $3,276.

Circulatory conditions were the most common causes of hospitalization.

- Circulatory conditions made up 15.7 percent of all hospital stays in 2006. These hospitalizations were for diagnoses such as atherosclerosis (coronary artery disease), congestive heart failure, heart attack, and irregular heart beat.
- Conditions surrounding pregnancy and childbirth (10.9 percent) were ranked second among reasons for hospitalizations. Combined with newborn hospital stays (10 percent), pregnancy and childbirth stays comprised nearly 21 percent of all hospital discharges.
- Conditions involving the respiratory system and the digestive system made up 10.3 percent and 8.6 percent of all hospital stays respectively.

\[2^{\text{Based on principal diagnosis}}\]
Conditions of the circulatory system accounted for a larger percentage hospital stays for men (19.9 percent) than for women (12.9 percent).

- Females accounted for 306,848 hospital stays, or 60 percent of all hospital stays in 2006.
  - Eighteen percent of female hospital stays were for pregnancy and childbirth conditions.
  - A smaller percentage of hospital stays for women than for men were due to conditions of the circulatory system, respiratory system, and digestive system.
  - Circulatory system and respiratory system conditions made up 12.9 percent and 9.3 percent of all female hospital stays respectively.

- Hospital stays for males totaled 203,639 stays, representing 40 percent of all hospital stays for 2006.
  - Males (12.9 percent) had a higher percentage of hospital stays for newborns than did females (8.1 percent).
  - Respiratory system conditions accounted for 11.7 percent of male stays.
  - The leading conditions (circulatory system, newborns, respiratory system, digestive system) accounted for 53.4 percent of all male hospital stays in 2006.
Admission source indicates the location or setting in which a patient might enter the hospital for medical treatment.

- In 2006, more than half (54 percent) of all admissions to hospitals were routine admissions.
- Emergency department accounted for the second largest percentage of hospital admissions (39 percent).
- Less than 10 percent of hospital admissions come from other short-term hospitals (4 percent) and long-term care facilities (2 percent).

Discharge status reflects where the patient went after being discharged from the hospital.

- By far, the most common patient discharge status was routine with nearly 3 in 4 discharges (73 percent) having been sent home without supervised health care.
- Long-term facilities were the destination of 12 percent of hospital discharges in 2006.
- Home health care accounted for 9 percent of all discharges.
- The remaining discharge status categories (e.g., against medical advice, in-hospital death, another short-term hospital) each accounted for less than 3 percent.
Persons aged 65 and older account for a larger percentage of Oklahoma hospitalizations.

- In 2006, individuals aged 65 and older comprised 13.2 percent of the Oklahoma population but contributed 36.3 percent of all hospital admissions.

- Both of the younger age groups had a smaller percentage of hospitalizations relative to their percentage of the Oklahoma population.
  - Patients aged 18-64 years, representing nearly 62 percent of the population, accounted for 47 percent of hospital stays.
  - Likewise, those under the age of 18 made up 25 percent of the Oklahoma population but accounted for just 16.4 percent of hospitalizations.

As age increases there is an increased likelihood of hospitalization.

- For the 1-4 age group, there were 40 discharges per 1,000 population in that age group, while in the oldest age group, those 85 and older, there were 599 discharges per 1,000 population.

- The highest discharge rate was found in the infant age group (1,105 hospitalizations per 1,000 infants), while the lowest discharge rate was found in the 5-9 age group (21 discharges per 1,000 population).
The expected primary payer holds the primary payment responsibility for a hospital stay. Partial payment of the costs of hospitalization may be borne by others payers, including the patient.

- In 2006, Medicare and Medicaid accounted for more than 60 percent of the primary financial responsibility for hospital stays.
  - Medicare was the expected primary payer for 40.1 percent of all inpatient hospital discharges.
  - Medicaid was the expected primary payer for 1 out of every 5 hospital stays in 2006.
- Private insurance was the expected primary payer for 27.7 percent of all discharges.
- Six percent of all hospital stays were recorded as uninsured stays.
SECTION 2

HOSPITAL INPATIENT STAYS BY DIAGNOSIS

EXHIBIT 2.1  Most Frequent Principal Diagnoses
EXHIBIT 2.2  Most Frequent Diagnoses by Age
EXHIBIT 2.3  Most Frequent Diagnoses by Gender
EXHIBIT 2.4  Average Length of Stay and Average Charges
EXHIBIT 2.5  Circulatory Conditions
EXHIBIT 2.6  Diabetes
EXHIBIT 2.7  Alcoholism
EXHIBIT 2.8  Mental Health
EXHIBIT 2.9  Injuries
EXHIBIT 2.10 Influenza
EXHIBIT 2.1  Most Frequent Principal Diagnosis

Number of Discharges and Percent Distribution of Most Frequent Principal Diagnoses for Inpatient Hospital Stays, 2006

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Number of Discharges</th>
<th>Percent of Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td>All discharges</td>
<td>510,513</td>
<td></td>
</tr>
<tr>
<td>Pregnancy, childbirth, and infants</td>
<td>106,366</td>
<td>20.8</td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>20,458</td>
<td>4.0</td>
</tr>
<tr>
<td>Coronary atherosclerosis and other heart disease</td>
<td>16,277</td>
<td>3.2</td>
</tr>
<tr>
<td>Rehabilitation care, fitting of prostheses, and adjustment of devices</td>
<td>14,585</td>
<td>2.9</td>
</tr>
<tr>
<td>Congestive heart failure, nonhypertensive</td>
<td>13,686</td>
<td>2.7</td>
</tr>
<tr>
<td>Nonspecific chest pain</td>
<td>12,701</td>
<td>2.5</td>
</tr>
<tr>
<td>Spondylosis, intervertebral disc disorders, and other back problems</td>
<td>11,667</td>
<td>2.3</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>9,566</td>
<td>1.9</td>
</tr>
<tr>
<td>Osteoarthritis</td>
<td>9,507</td>
<td>1.9</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>9,338</td>
<td>1.8</td>
</tr>
<tr>
<td>Septicemia (except in labor)</td>
<td>8,800</td>
<td>1.7</td>
</tr>
<tr>
<td>Cardiac dysrhythmias</td>
<td>8,544</td>
<td>1.7</td>
</tr>
<tr>
<td>Acute myocardial infarction</td>
<td>8,434</td>
<td>1.7</td>
</tr>
<tr>
<td>Fluid and electrolyte disorders</td>
<td>8,264</td>
<td>1.6</td>
</tr>
<tr>
<td>Complication of device, implant or graft</td>
<td>7,814</td>
<td>1.5</td>
</tr>
</tbody>
</table>

The top 15 most common principal diagnoses made up more than half (52.2 percent) of all hospital discharges in 2006.

Among all discharges:

- Pregnancy, childbirth, and infant-related conditions were the predominant reasons for hospital stays. These conditions accounted for 1 in 5 of all hospital stays in 2006.

- The second leading principal diagnosis was pneumonia, accounting for 20,458 discharges or 4 percent of all stays.

- Circulatory diseases accounted for 5 of the top 15 most frequent principal diagnoses. Leading the way were coronary atherosclerosis, nonhypertensive congestive heart failure, and nonspecific chest pain, accounting for 3.2 percent, 2.7 percent and 2.5 percent of all discharges, respectively.

- Rehabilitation care, prosthetic fittings, and adjustments for medical devices accounted for 2.9 percent of all discharges.
Number and Percent of Discharges for the Most Frequent Principal Diagnoses for Maternal and Infant Discharges, 2006

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Number of Discharges</th>
<th>Percent of Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td>All maternal discharges</td>
<td>55,163</td>
<td></td>
</tr>
<tr>
<td>Other complications of birth, puerperium affecting management of mother</td>
<td>8,223</td>
<td>14.9</td>
</tr>
<tr>
<td>OB-related trauma to perineum and vulva</td>
<td>7,729</td>
<td>14.0</td>
</tr>
<tr>
<td>Previous cesarean section</td>
<td>6,586</td>
<td>11.9</td>
</tr>
<tr>
<td>Other complications of pregnancy</td>
<td>6,454</td>
<td>11.7</td>
</tr>
<tr>
<td>Normal pregnancy and/or delivery</td>
<td>4,323</td>
<td>7.8</td>
</tr>
<tr>
<td>Hypertension complicating pregnancy, childbirth and the puerperium</td>
<td>3,319</td>
<td>6.0</td>
</tr>
<tr>
<td>Early or threatened labor</td>
<td>2,898</td>
<td>5.3</td>
</tr>
<tr>
<td>Fetal distress and abnormal forces of labor</td>
<td>2,467</td>
<td>4.5</td>
</tr>
<tr>
<td>Prolonged pregnancy</td>
<td>2,381</td>
<td>4.3</td>
</tr>
<tr>
<td>Umbilical cord complication</td>
<td>2,364</td>
<td>4.3</td>
</tr>
<tr>
<td>All infant discharges</td>
<td>51,203</td>
<td></td>
</tr>
<tr>
<td>Liveborn</td>
<td>49,091</td>
<td>95.9</td>
</tr>
<tr>
<td>Other perinatal conditions</td>
<td>1,163</td>
<td>2.3</td>
</tr>
<tr>
<td>Hemolytic jaundice and perinatal jaundice</td>
<td>440</td>
<td>0.9</td>
</tr>
<tr>
<td>Respiratory distress syndrome</td>
<td>271</td>
<td>0.5</td>
</tr>
<tr>
<td>Short gestation, low birth weight, and fetal growth retardation</td>
<td>224</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Among maternal discharges:

- The top 10 leading principal diagnoses for maternal discharges accounted for 84.7 percent of all maternal hospital stays.

- Other birth complications and puerperium affecting management of mother was the top principal diagnosis, accounting for 14.9 percent of maternal hospital stays.

- The principal diagnoses for previous cesarean section and normal pregnancy and/or delivery accounted for 11.9 percent and 7.8 percent, respectively, of maternal discharges.

- Obstetric-related trauma to perineum and vulva accounted for 14 percent of maternal discharges, while other complications of pregnancy made up 11.7 percent of all such discharges.

Among infant discharges:

- Far and away the leading principal diagnosis for infants was that for newborn infants (95.9 percent).

- A much small fraction of infant discharges was accounted for by other perinatal conditions (2.3 percent).
### EXHIBIT 2.2  Most Frequent Diagnoses by Age

#### Number and Percent of Discharges for the Most Frequent Principal Diagnoses by Age, 2006

<table>
<thead>
<tr>
<th>Age Group and Principal Diagnosis</th>
<th>Number of Discharges</th>
<th>Percent of Total Discharges</th>
<th>Percent of Age-Specific Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All ages</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1 year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liveborn</td>
<td>49,091</td>
<td>9.6</td>
<td>84.8</td>
</tr>
<tr>
<td>Acute bronchitis</td>
<td>1,195</td>
<td>0.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Other perinatal conditions</td>
<td>1,145</td>
<td>0.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>844</td>
<td>0.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Hemolytic jaundice and perinatal jaundice</td>
<td>440</td>
<td>0.1</td>
<td>0.8</td>
</tr>
<tr>
<td>1-17 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>2,167</td>
<td>0.4</td>
<td>8.2</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>2,114</td>
<td>0.4</td>
<td>8.0</td>
</tr>
<tr>
<td>Asthma</td>
<td>1,615</td>
<td>0.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Fluid and electrolyte disorder</td>
<td>1,036</td>
<td>0.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Appendicitis and other appendiceal conditions</td>
<td>921</td>
<td>0.2</td>
<td>3.5</td>
</tr>
<tr>
<td>18-44 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other complications of birth, puerperium affecting management of mother</td>
<td>7,720</td>
<td>1.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Obstetric-related trauma to perineum and vulva</td>
<td>7,341</td>
<td>1.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Previous cesarean section</td>
<td>6,554</td>
<td>1.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Other complications of pregnancy</td>
<td>6,125</td>
<td>1.2</td>
<td>5.0</td>
</tr>
<tr>
<td>Normal pregnancy and/or delivery</td>
<td>4,131</td>
<td>0.8</td>
<td>3.4</td>
</tr>
<tr>
<td>45-64 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coronary atherosclerosis and other heart disease</td>
<td>6,736</td>
<td>1.3</td>
<td>5.7</td>
</tr>
<tr>
<td>Nonspecific chest pain</td>
<td>6,167</td>
<td>1.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Spondylosis, intervertebral disc disorders, and other back problems</td>
<td>5,116</td>
<td>1.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>4,180</td>
<td>0.8</td>
<td>3.5</td>
</tr>
<tr>
<td>Osteoarthritis</td>
<td>3,527</td>
<td>0.7</td>
<td>3.0</td>
</tr>
<tr>
<td>Congestive heart failure, nonhypertensive</td>
<td>3,274</td>
<td>0.6</td>
<td>2.8</td>
</tr>
<tr>
<td>65+ years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>11,669</td>
<td>2.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Rehabilitation care, fitting of prostheses, and adjustment of devices</td>
<td>11,317</td>
<td>2.2</td>
<td>6.1</td>
</tr>
<tr>
<td>Congestive heart failure, nonhypertensive</td>
<td>9,799</td>
<td>1.9</td>
<td>5.3</td>
</tr>
<tr>
<td>Coronary atherosclerosis and other heart disease</td>
<td>8,666</td>
<td>1.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Cardiac dysrhythmias</td>
<td>5,877</td>
<td>1.2</td>
<td>3.2</td>
</tr>
</tbody>
</table>
The principal diagnoses varied by patient age. The youngest patients were more frequently hospitalized for infections and childbirth-related conditions, young adults were more likely to be hospitalized for pregnancy- and childbirth-related conditions, while other patients were more commonly admitted for chronic conditions like heart disease.

- With the one exception of ages 18-44, pneumonia was a leading principal diagnosis for each of the age groups. It was the top condition for hospitalization among ages 1-17 and ages 65 and older.

- Mood disorders (depression and bipolar disorders) were the second leading cause of hospitalization for ages 1-17, accounting for 8 percent of hospital stays in this age group.

- Asthma accounted for 6.1 percent of pediatric hospital stays.

- Each of the top 5 leading conditions for hospitalization among adults 18-44 was related to pregnancy or childbirth conditions.

- Normal pregnancy and/or delivery accounted for 3.4 percent of hospital stays in the 18-44 age group.

- Cardiovascular conditions were the most common diagnoses for adults aged 45 or older.

  - For those aged 45-64 years, coronary atherosclerosis, nonspecific chest pain, and congestive heart failure accounted for 5.7 percent, 5.2 percent, and 3.0 percent, respectively, of all hospital stays.

  - Those age 65 and older, congestive heart failure (5.3 percent), coronary atherosclerosis (4.7 percent), and cardiac dysrhythmias (3.2 percent) were the leading cardiovascular conditions leading to hospital admission.

- Spondylosis and osteoarthritis accounted for 4.3 percent and 3.0 percent of hospitalizations for those aged 45-64 years.
EXHIBIT 2.3  Most Frequent Diagnoses by Gender

Number of Discharges, Percent Distribution, and Rank of Most Frequent Diagnoses for Inpatient Hospital Stays by Gender, 2006

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Discharges</td>
<td>Percent of Male Discharges</td>
</tr>
<tr>
<td>All diagnoses</td>
<td>203,660</td>
<td>100.0</td>
</tr>
<tr>
<td>Pregnancy and childbirth</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Liveborn</td>
<td>25,076</td>
<td>12.3</td>
</tr>
<tr>
<td>Coronary atherosclerosis</td>
<td>9,611</td>
<td>4.7</td>
</tr>
<tr>
<td>Pneumonia (except that cause by tuberculosis or sexually transmitted disease)</td>
<td>9,302</td>
<td>4.6</td>
</tr>
<tr>
<td>Congestive heart failure, nonhypertensive</td>
<td>6,519</td>
<td>3.2</td>
</tr>
<tr>
<td>Spondylosis, intervertebral disc disorders, other back problems</td>
<td>5,435</td>
<td>2.7</td>
</tr>
<tr>
<td>Nonspecific chest pain</td>
<td>5,294</td>
<td>2.6</td>
</tr>
<tr>
<td>Rehabilitation care, fitting of prostheses, adjustment of devices</td>
<td>5,205</td>
<td>2.6</td>
</tr>
<tr>
<td>Acute myocardial infarction</td>
<td>5,047</td>
<td>2.5</td>
</tr>
<tr>
<td>Septicemia (except in labor)</td>
<td>3,953</td>
<td>1.9</td>
</tr>
<tr>
<td>Complication of device, implant or graft</td>
<td>3,949</td>
<td>1.9</td>
</tr>
<tr>
<td>Osteoarthritis</td>
<td>3,586</td>
<td>1.9</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>3,706</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Setting aside pregnancy and childbirth, a majority of the most frequent diagnoses are common to both males and females.

- Women accounted for 60 percent of all hospital stays in 2006, representing 306,828 hospital discharges. Eighteen percent of female hospital stays were for pregnancy and childbirth.

- Liveborn hospital stays accounted for 12.3 percent of male discharges and 7.8 percent of female discharges.

- Pneumonia was the third leading cause of hospitalization for both males and females.

- Cardiovascular conditions accounted for 13 percent of male hospital stays but just 8 percent of female hospital stays.

- Acute myocardial infarction ranked 8th among males (2.5 percent of male stays) as a leading cause for hospitalization, yet ranked just 20th among females as a cause for hospital admission (1.1 percent of female stays).

- Osteoarthritis and mood disorders were ranked 9th and 10th, respectively, as frequent diagnoses of female hospitalizations.
EXHIBIT 2.4  Average Length of Stay and Average Charges

Inpatient Hospital Stays for Principal Diagnosis: Average Length of Stay and Average Charges, 2006

- As expected, longer lengths of hospital stay are associated with higher average charges.

- The average length for premature birth and low birth weight was 21.7 days with associated average charges of $89,748. Premature birth and low birth weight had the 5th highest average length of stay but had the 3rd highest value for average charges.

- Spinal cord injury averaged 18.1 hospital days and posted the highest average charges, $109,243.

- Developmental disorders (40.8 days); disorders diagnosed in infancy, childhood, or adolescence (35.6 days); and attention-deficit disorders (34.9 days) were recorded having the longest lengths of stay.

- Hospital stays for abortion averaged 1.5 days with associated average costs of $8,374 for spontaneous abortions and $8,965 for induced abortion.

- The median values for the average length of stay and average charges were 4.0 days and $19,320, respectively.
EXHIBIT 2.5  Circulatory Conditions

Number and Percent of Discharges for the Most Frequent Principal Diagnoses of Circulatory Conditions by Gender, 2006

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Total Discharges</th>
<th>Males Percent</th>
<th>Females Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>All circulatory disease discharges</td>
<td>88,161</td>
<td>49.0</td>
<td>51.0</td>
<td></td>
</tr>
<tr>
<td>Coronary atherosclerosis</td>
<td>12,277</td>
<td>59.0</td>
<td>41.0</td>
<td>3</td>
</tr>
<tr>
<td>Congestive heart failure, nonhypertensive</td>
<td>13,686</td>
<td>47.6</td>
<td>52.4</td>
<td>2</td>
</tr>
<tr>
<td>Nonspecific chest pains</td>
<td>12,701</td>
<td>41.7</td>
<td>58.3</td>
<td>1</td>
</tr>
<tr>
<td>Cardiac dysrhythmias</td>
<td>8,544</td>
<td>46.1</td>
<td>53.9</td>
<td>4</td>
</tr>
<tr>
<td>Acute myocardial infarction</td>
<td>8,434</td>
<td>59.8</td>
<td>40.2</td>
<td>6</td>
</tr>
<tr>
<td>Acute cerebrovascular disease</td>
<td>6,520</td>
<td>43.5</td>
<td>56.5</td>
<td>5</td>
</tr>
<tr>
<td>Peripheral and visceral atherosclerosis</td>
<td>2,766</td>
<td>47.9</td>
<td>52.1</td>
<td>8</td>
</tr>
<tr>
<td>Transient cerebral ischemia</td>
<td>2,664</td>
<td>37.8</td>
<td>62.2</td>
<td>7</td>
</tr>
<tr>
<td>Occlusion or stenosis of precerebral arteries</td>
<td>2,199</td>
<td>53.9</td>
<td>46.1</td>
<td>12</td>
</tr>
<tr>
<td>Hypertension with complications and secondary hypertension</td>
<td>2,119</td>
<td>42.2</td>
<td>57.8</td>
<td>9</td>
</tr>
<tr>
<td>Phlebitis, thrombophlebitis, and thromboembolism</td>
<td>2,034</td>
<td>45.2</td>
<td>54.8</td>
<td>10</td>
</tr>
</tbody>
</table>

The proportion of all circulatory disease discharges was roughly equal by gender with males accounting for 49 percent and females, 51 percent.

- Males were more likely to be discharged with a diagnosis of acute myocardial infarction (59.8 percent), coronary atherosclerosis (59 percent), and occlusion or stenosis of precerebral arteries (53.9 percent).

- Females accounted for a larger percentage of discharges for transient cerebral ischemia (62.2 percent); nonspecific chest pain (58.3 percent); hypertension (57.8 percent); acute cerebrovascular disease (56.5 percent); phlebitis, thrombophlebitis, and thromboembolism (54.8 percent); cardiac dysrhythmias (53.9 percent); congestive heart failure (52.4 percent); and peripheral and visceral atherosclerosis (52.1 percent).

- Both males and females share the leading conditions for circulatory disease hospitalization, although they occur with different frequency by gender.
• Among men, in 2006, the rate of hospitalization for coronary atherosclerosis was 544 per 100,000 population. For women, the rate was 368 per 100,000 female population.

• The likelihood for hospitalization was higher among males for coronary atherosclerosis, acute myocardial infarction, and occlusion or stenosis of precerebral arteries.

• For women, the rate of hospitalization (409 per 100,000 female population) was highest for nonspecific chest pain. The comparable rate for men was 300 per 100,000 male population.

• Women were more likely to be hospitalized for nonspecific chest pain, congestive heart failure, cardiac dysrhythmias, acute cerebrovascular disease, peripheral and visceral atherosclerosis, transient cerebral ischemia, hypertension, and phlebitis.
• In 2006, diabetes accounted for 23.1 percent of all hospital stays in Oklahoma.

• The rate of diabetes hospitalization varied by age. The highest rate of hospitalization occurred among Oklahomans aged 65-84 years (13,444 discharges per 100,000 population).

• Diabetes hospitalization was 2.8 times higher for Oklahomans aged 65 and older than for those aged 45-64 years.

• Nearly 9 in 10 of Oklahomans hospitalized for diabetes were aged 45 or older. The bulk of these was reported in the age groups 45-64 years (36.1 percent) and 65-84 years (46.6 percent).

• Less than 1 percent of hospitalizations due to diabetes occurred among infants and children.
For 2006, there were a total of 3,071 discharges with the principal diagnosis of alcoholism.

Fifty percent of discharges for alcoholism were to adults aged 45-64 years.

Only 1 percent of discharges with a principal diagnosis of alcoholism occurred to children less 18 years of age.

For the adult patients, males make up the dominant proportion of those admitted to hospital for alcoholism. For ages 18 or older, more than 70 percent of hospital discharges due to alcoholism occur to males.

Only in the youngest age group did females account for a slightly higher percentage of hospital stays for which alcoholism was the principal diagnosis. Here caution is warranted given the small number of discharge events in this age group.
The primary payer for all hospital discharges differed from the expected primary payer for discharges related to alcoholism.

- Uninsured patients accounted for 33.1 percent of alcohol-related discharges but only 6.3 percent of hospital stays in general.

- Among all discharges Medicare was 2.4 times more likely to be the primary payer when compared to alcohol-related discharges (40.1 percent vs. 16.6 percent).

- A higher percentage of all discharges had Medicare (40.1 percent), private insurance (27.7 percent), and Medicaid (21.3 percent) as the expected primary payer than did alcohol-related discharges.
EXHIBIT 2.8 Mental Health

Distribution of Discharges by Age for Stays with a Principal Diagnosis of a Mental Health Condition, 2006

- In 2006, there were 24,257 hospital stays for which mental illness or substance abuse was listed as the principal diagnosis.

Hospital discharge data used in this report exclude discharges from mental health and substance abuse facilities. However, mood disorders (depression and bipolar conditions) were the eighth leading principal diagnosis in 2006. There were a number of mental health conditions for which Oklahomans were hospitalized. Mental health conditions vary by age of patient.

- Mood disorders (depression and bipolar disorders) were the leading principal mental health diagnosis, accounting for 57.8 percent of all mental health diagnoses in this age group.

- Attention deficit disorder (ADD), conduct, and disruptive behavior disorders accounted for 15.9 percent of mental health discharges for this age group.

Ages 18-44 years:
- Mood disorders were the most frequently diagnosed mental health condition among adults 18-44 years, accounting for 43.1 percent of mental health discharges.
- Schizophrenia and other psychotic disorders (20.1 percent) and substance-related disorders (15.6 percent) were the other two leading mental health diagnoses in this age group.
- A small percentage of adults (2.6 percent) in this age group were admitted to hospital for delirium, dementia, amnestic, and other cognitive disorders.

Ages 45-64 years:
- As with the two younger age groups, mood disorders were the most commonly diagnosed mental health condition for this age group, making up 37.5 percent of mental health stays.
• Similar to the 18-44 age group, albeit at slightly lower percentages, schizophrenia and other psychotic disorders (20.0 percent) and substance-related disorders (11.3 percent) were the next two most commonly diagnosed mental health conditions for adults aged 45-64 years.

Ages 65 or older:

• For adults aged 65 or older, delirium, dementia, amnestic, and other cognitive disorders were the most frequently diagnosed mental health condition. For adults aged 65-84, 46.3 percent had these conditions as their principal diagnosis, while 77.2 percent of adults in the 85 or older age group had this same diagnosis.

• Mood disorders were the second leading principal mental health diagnosis for these two age groups, accounting for 28.5 percent and 13.2 percent, respectively, of hospital stays for adults aged 65-84 years and adults aged 85 or older.
EXHIBIT 2.9  Injuries

Number of Stays, Average Cost per Stay, Average Length of Stay, and In-hospital Death Rate for Discharges with an Injury Diagnosis, 2006

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Total Number of Stays</th>
<th>Average Costs per Stay</th>
<th>Average Length of Stay</th>
<th>In-Hospital Death Rate (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All injuries</td>
<td>25,162</td>
<td>$8,805</td>
<td>4.9</td>
<td>2.2</td>
</tr>
<tr>
<td>Spinal cord injury</td>
<td>159</td>
<td>$34,600</td>
<td>18.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Burns</td>
<td>467</td>
<td>$15,321</td>
<td>9.3</td>
<td>3.9</td>
</tr>
<tr>
<td>Crushing injury or internal injury</td>
<td>1,416</td>
<td>$13,737</td>
<td>7.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Intracranial injury</td>
<td>2,288</td>
<td>$12,294</td>
<td>6.6</td>
<td>7.8</td>
</tr>
<tr>
<td>Fracture of neck of femur (hip fracture)</td>
<td>4,283</td>
<td>$11,493</td>
<td>6.3</td>
<td>2.7</td>
</tr>
<tr>
<td>Fracture of lower limb</td>
<td>3,029</td>
<td>$9,797</td>
<td>4.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Other fractures</td>
<td>2,809</td>
<td>$9,219</td>
<td>6.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Skull and face fractures</td>
<td>664</td>
<td>$7,767</td>
<td>3.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Fracture of upper limb</td>
<td>1,722</td>
<td>$7,660</td>
<td>3.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Joint disorders and dislocations, trauma-related</td>
<td>446</td>
<td>$7,636</td>
<td>2.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Open wound of extremities</td>
<td>575</td>
<td>$6,592</td>
<td>4.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Open wounds of head, neck, and trunk</td>
<td>523</td>
<td>$5,909</td>
<td>3.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Poisoning by nonmedicinal substances</td>
<td>520</td>
<td>$5,242</td>
<td>2.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Other injuries and conditions due to external causes</td>
<td>1,485</td>
<td>$4,617</td>
<td>3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Sprains and strains</td>
<td>572</td>
<td>$4,589</td>
<td>2.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Superficial injury, contusion</td>
<td>731</td>
<td>$3,994</td>
<td>3.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Poisoning by psychotropic agents</td>
<td>1,517</td>
<td>$3,685</td>
<td>2.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Poisoning by other medications and drugs</td>
<td>1,956</td>
<td>$3,667</td>
<td>2.3</td>
<td>1.3</td>
</tr>
</tbody>
</table>
In 2006, approximately 5 percent (25,162 injuries) of all hospital stays to Oklahomans were for treatment for an injury. Costs, duration of stay, and hospital death rates showed variation by injury type.

- Spinal cord injuries had the highest average cost per stay ($34,600), the longest length of stay (18.1 days), and the highest in-hospital death rate (8.2 percent), but recorded the fewest number of hospital stays (159), representing less than 1 percent of all injury-related hospitalizations.

- The most frequent injury-related hospitalization was for hip fracture (4,283 hospital stays), lower limb fractures (3,029 hospital stays), other fractures (2,809 hospital stays), intracranial injury (2,288 hospital stays), and poisoning by other medications and drugs (1,956 hospital stays). These five injuries accounted for 57 percent of all injury-related hospitalizations.

- Hospitalizations for burns were second highest for average cost ($15,321) and mean length of stay (9.3 days).
EXHIBIT 2.10  Influenza

Characteristics of All Hospital Stays and Stays with a Principal Diagnosis of Influenza, 2006

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>All Hospital Stays</th>
<th>Hospital Stays for Influenza</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of discharges</td>
<td>510,513</td>
<td>683</td>
</tr>
<tr>
<td>Mean length of stay in days</td>
<td>4.8</td>
<td>3.8</td>
</tr>
<tr>
<td>Mean cost of hospitalizations</td>
<td>$6,919</td>
<td>$4,137</td>
</tr>
<tr>
<td>Mean hospital cost per day</td>
<td>$1,441</td>
<td>$1,088</td>
</tr>
<tr>
<td>Aggregate costs for Oklahoma</td>
<td>$3,531,003,891</td>
<td>$2,825,379</td>
</tr>
<tr>
<td>Percent admissions through emergency department</td>
<td>39%</td>
<td>63%</td>
</tr>
<tr>
<td>Percent died in hospital</td>
<td>2.3%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Percent &lt;1 year (excluding newborns)</td>
<td>1.7%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Percent 1-64 years</td>
<td>52%</td>
<td>41%</td>
</tr>
<tr>
<td>Percent 65 years and older</td>
<td>36%</td>
<td>45%</td>
</tr>
</tbody>
</table>

- In 2006, there were 683 hospital stays with the principal diagnosis for influenza. This represents less than 1 percent of all hospital stays for that year.

- The length of hospital stays for influenza, when compared to all hospital stays, was on average 20 percent shorter (3.8 versus 4.8 days) and 40 percent less costly ($4,137 versus $6,919).

- Influenza hospital stays were more than 1.5 times more likely to originate in the emergency department than were all hospital stays.

- Infants (13.2 percent) and the elderly (45 percent) made up larger percentages of hospital stays for influenza when compared to all hospital stays.
SECTION 3

HOSPITAL INPATIENT STAYS BY PROCEDURE

EXHIBIT 3.1  Most Frequent All-Listed Procedures
EXHIBIT 3.2  Most Frequent All-Listed Procedures by Age
EXHIBIT 3.3  Childbirth
EXHIBIT 3.4  Cardiovascular Procedures
EXHIBIT 3.5  Bariatric Surgery
EXHIBIT 3.6  Orthopedic Procedures
The top 10 most frequently performed procedures as based on all-listed procedures.

- More than half (54.8 percent) of all hospital stays included at least one performed procedure.

- Blood transfusion was the procedure most commonly used during hospital stays in 2006, accounting for 4.6 percent of all performed procedures.

- Procedures assisting delivery (4.2 percent of all procedures) were the second most commonly performed procedures.

- Diagnostic cardiac catheterization and coronary arteriography accounted for 20,372 (3.7 percent) performed procedures; combining to be the third most commonly performed procedures.

- Among the top 10 commonly used procedures, those related to pregnancy and childbirth hospitalizations (other procedures assisting delivery, circumcisions, and cesarean sections) accounted for 10.6 percent of all hospital stays that included a procedure.

### EXHIBIT 3.1  Most Frequent All-Listed Procedures

**Number and Percent Distribution of Discharges for the Most Frequent All-listed Inpatient Hospital Procedures, 2006**

<table>
<thead>
<tr>
<th>All-listed Procedures</th>
<th>Number of Stays with Procedure</th>
<th>Percent of Discharges with Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>All discharges</td>
<td>510,513</td>
<td>100.0</td>
</tr>
<tr>
<td>All discharges with procedure</td>
<td>280,112</td>
<td>100.0</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>25,337</td>
<td>4.6</td>
</tr>
<tr>
<td>Other procedures to assist delivery</td>
<td>23,061</td>
<td>4.2</td>
</tr>
<tr>
<td>Diagnostic cardiac catheterization and coronary arteriography</td>
<td>20,372</td>
<td>3.7</td>
</tr>
<tr>
<td>Other vascular catheterization, not heart</td>
<td>18,744</td>
<td>3.4</td>
</tr>
<tr>
<td>Other OR procedures on vessels other than head and neck</td>
<td>18,341</td>
<td>3.4</td>
</tr>
<tr>
<td>Circumcision</td>
<td>18,208</td>
<td>3.3</td>
</tr>
<tr>
<td>Cesarean section</td>
<td>16,811</td>
<td>3.1</td>
</tr>
<tr>
<td>Respiratory intubation and mechanical ventilation</td>
<td>14,736</td>
<td>2.7</td>
</tr>
<tr>
<td>Other therapeutic procedures</td>
<td>13,874</td>
<td>2.5</td>
</tr>
</tbody>
</table>
### EXHIBIT 3.2  Most Frequent All-listed Procedures by Age

**Number and Percent Distribution of Discharges for the Most Frequent All-listed Inpatient Hospital Procedures by Age Group, 2006**

<table>
<thead>
<tr>
<th>Age Group and All-Listed Procedures</th>
<th>Number of Discharges</th>
<th>Percent of All Discharges</th>
<th>Percent of Age-Specific Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td>All discharges, all ages</td>
<td>274,172</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>&lt;1 year, all discharges</td>
<td>26,535</td>
<td>9.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Circumcision</td>
<td>18,176</td>
<td>6.6</td>
<td>68.5</td>
</tr>
<tr>
<td>Prophylactic vaccinations and inoculations</td>
<td>5,858</td>
<td>2.1</td>
<td>22.1</td>
</tr>
<tr>
<td>Respiratory intubation and mechanical ventilation</td>
<td>2,288</td>
<td>0.8</td>
<td>8.6</td>
</tr>
<tr>
<td>Other therapeutic procedures</td>
<td>1,818</td>
<td>0.7</td>
<td>6.9</td>
</tr>
<tr>
<td>Other vascular catheterization, not heart</td>
<td>1,215</td>
<td>0.4</td>
<td>4.6</td>
</tr>
<tr>
<td>1-17 years, all discharges</td>
<td>9,524</td>
<td>0.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Other procedures to assist delivery</td>
<td>1,104</td>
<td>0.4</td>
<td>11.6</td>
</tr>
<tr>
<td>Appendectomy</td>
<td>1,015</td>
<td>0.4</td>
<td>10.7</td>
</tr>
<tr>
<td>Repair of current obstetric laceration</td>
<td>730</td>
<td>0.3</td>
<td>7.7</td>
</tr>
<tr>
<td>Cancer chemotherapy</td>
<td>636</td>
<td>0.2</td>
<td>6.7</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>596</td>
<td>0.2</td>
<td>6.3</td>
</tr>
<tr>
<td>18-44 years, all discharges</td>
<td>85,122</td>
<td>31.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Other procedures to assist delivery</td>
<td>21,938</td>
<td>8.0</td>
<td>25.8</td>
</tr>
<tr>
<td>Cesarean section</td>
<td>16,267</td>
<td>5.9</td>
<td>19.1</td>
</tr>
<tr>
<td>Repair of current obstetric laceration</td>
<td>12,215</td>
<td>4.5</td>
<td>14.3</td>
</tr>
<tr>
<td>Artificial rupture of membranes to assist delivery</td>
<td>11,581</td>
<td>4.2</td>
<td>13.6</td>
</tr>
<tr>
<td>Episiotomy</td>
<td>4,591</td>
<td>1.7</td>
<td>5.4</td>
</tr>
<tr>
<td>45-64 years, all discharges</td>
<td>65,747</td>
<td>24.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Diagnostic cardiac catheterization, coronary arteriography</td>
<td>9,030</td>
<td>3.3</td>
<td>13.7</td>
</tr>
<tr>
<td>Other OR procedures on vessels other than head and neck</td>
<td>6,956</td>
<td>2.5</td>
<td>10.6</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>6,852</td>
<td>2.5</td>
<td>10.4</td>
</tr>
<tr>
<td>Other vascular catheterization, not heart</td>
<td>5,931</td>
<td>2.2</td>
<td>9.0</td>
</tr>
<tr>
<td>Other non-OR therapeutic cardiovascular procedures</td>
<td>5,667</td>
<td>2.1</td>
<td>8.5</td>
</tr>
<tr>
<td>65+ years, all discharges</td>
<td>87,244</td>
<td>31.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>14,160</td>
<td>5.2</td>
<td>16.2</td>
</tr>
<tr>
<td>Other OR procedures on vessels other than head and neck</td>
<td>10,020</td>
<td>3.7</td>
<td>11.5</td>
</tr>
<tr>
<td>Diagnostic cardiac catheterization, coronary arteriography</td>
<td>9,615</td>
<td>3.5</td>
<td>11.0</td>
</tr>
<tr>
<td>Other vascular catheterization, not heart</td>
<td>8,400</td>
<td>3.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Upper gastrointestinal endoscopy</td>
<td>7,358</td>
<td>2.7</td>
<td>8.4</td>
</tr>
</tbody>
</table>
In general, the most frequently used procedures differed by age group, although the older two age groups did share many of the most commonly used procedures.

- Circumcision was the most commonly used procedure for the infant age group, accounting for 68.5 percent of procedures among infants and 6.6 percent of procedures for all discharges for which a procedure was performed.

- Vaccinations, the second most frequently used procedure, accounted for 22.1 percent of procedures performed on infants.

- Among children aged 1-17, other procedures to assist delivery (11.6 percent) and appendectomy (10.7 percent) were the two most commonly used procedures.

- The top five most frequently used procedures for adults aged 18-44 years were all pregnancy- and childbirth-related procedures.

- Heart-related measures, such as coronary arteriography and other non-OR therapeutic cardiovascular procedures, were two of the most frequently performed procedures in the age group 45-64 years. These two procedures accounted for 13.7 percent and 8.6 percent, respectively.

- The age groups for ages 45-64 years and those 65 or older share the top 4 of 5 commonly used procedures, albeit in different order of frequency. Those shared by the two age groups include blood transfusion, other OR procedures on vessels other than head and neck, coronary arteriography, and other non-heart vascular catheterization. Combined these four procedures accounted for 43.8 percent of procedures performed on those aged 45-64 years and 48.4 percent on those aged 65 or older.
Pregnancy and childbirth is the second leading reason for hospitalization.

- In 2006, vaginal births with no prior history of cesarean section (C-section) accounted for 31,365 hospitalizations, or nearly two-thirds (64.8 percent) of childbirth-related stays.

- Cesarean section deliveries made up 34.7 percent of childbirth hospital stays. First time C-sections accounted for 19.2 percent, while repeat C-sections added 15.4 percent of childbirth stays.

- Vaginal birth after cesarean section (VBAC) accounted for the smallest percentage of childbirth stays, accounting for less than 1 percent of such stays.

Setting aside pregnancy and childbirth, cardiovascular procedures to treat heart disease and stroke are the most common reasons for hospitalization.

- There were a total of 17,545 cardiovascular procedures performed in 2006.

- The majority of hospital admissions for cardiovascular procedures can be attributed to percutaneous transluminal coronary angioplasty (PCTA), 66.5 percent.

- The second most commonly performed cardiovascular procedure was coronary artery bypass graft (CABG), which accounted for just over 1 in 5 cardiovascular procedures.
EXHIBIT 3.5 Orthopedic Procedures

Percent Distribution of the Most Frequent Musculoskeletal All-listed Procedures within Age Groups, 2006

The most frequent musculoskeletal procedures increase with patient age. Yet the distribution of musculoskeletal procedures differed within each age group.

Infants and children:

- The most common musculoskeletal procedure for children under 18 years of age was treatment of fracture or dislocation of hip and femur.

- For both infants and children between the ages of 1 and 17, the second most frequently performed musculoskeletal procedure was the partial excision of bone.

Adults aged 18-44:

- Spinal fusion was the leading musculoskeletal procedure for this age group.

- Partial excision of bone accounted for more than ten percent of musculoskeletal procedures, and another nine percent went to the treatment of fracture or dislocation of a lower extremity.

Adults aged 45-64:

- Similar to the younger group of adults, spinal fusion (20.6 percent) was the leading performed musculoskeletal procedure for this age group.

- Arthroplasty of the knee was the second most common musculoskeletal procedure, making up roughly 1 in 6 musculoskeletal procedures.

- Partial excision of bone accounted for nine percent of musculoskeletal-related discharges in this age group.

Seniors aged 65-84:

- Arthroplasty of the knee was the leading musculoskeletal procedure performed on patients aged 65-84 years, accounting for more than one-fourth (26.3 percent) of all musculoskeletal procedures for persons in this age category.

Unmarked bar segments equal one percent or less.
• Replacement of hip (13.6 percent) was the second leading musculoskeletal procedure for this age group, while treatment of fracture or dislocation of hip and femur was ranked third (10.7 percent).

Seniors 85 years or older:

• The number one musculoskeletal procedure performed on the elderly aged 85 years or older was treatment of fracture or dislocation of hip and femur, making up 36 percent of orthopedic procedures.

• For this age group, roughly 25 percent of musculoskeletal procedures were those for hip replacement.
SECTION 4

SPENDING FOR HOSPITAL INPATIENT STAYS

EXHIBIT 4.1  Costs for the Most Frequent Diagnoses
EXHIBIT 4.2  Average Charges for the Most Frequent Conditions
### Top 20 Inpatient Principal Diagnoses with the Highest Aggregate Costs, 2006

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Total Inflation-Adjusted Hospital Costs</th>
<th>Percent of Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>All diagnoses</td>
<td>$3,627,215,754</td>
<td>100.0</td>
</tr>
<tr>
<td>Coronary atherosclerosis (coronary artery disease)</td>
<td>$201,722,315</td>
<td>5.6</td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>$138,159,395</td>
<td>3.8</td>
</tr>
<tr>
<td>Spondylosis, intervertebral disc disorders, other back problems</td>
<td>$133,512,740</td>
<td>3.7</td>
</tr>
<tr>
<td>Acute myocardial infarction (heart attack)</td>
<td>$129,791,017</td>
<td>3.6</td>
</tr>
<tr>
<td>Congestive heart failure, nonhypertensive</td>
<td>$123,734,498</td>
<td>3.4</td>
</tr>
<tr>
<td>Rehabilitation care, fitting of prostheses, and adjustment of devices</td>
<td>$119,478,051</td>
<td>3.3</td>
</tr>
<tr>
<td>Septicemia (blood infection)</td>
<td>$114,289,079</td>
<td>3.2</td>
</tr>
<tr>
<td>Liveborn (newborn infant)</td>
<td>$109,027,114</td>
<td>3.0</td>
</tr>
<tr>
<td>Osteoarthritis (degenerative joint disease)</td>
<td>$107,784,024</td>
<td>3.0</td>
</tr>
<tr>
<td>Respiratory failure</td>
<td>$102,717,931</td>
<td>2.8</td>
</tr>
<tr>
<td>Complication of medical device, implant or graft</td>
<td>$96,565,400</td>
<td>2.7</td>
</tr>
<tr>
<td>Cardiac dysrhythmias (irregular heart beat)</td>
<td>$73,979,255</td>
<td>2.0</td>
</tr>
<tr>
<td>Complications of surgical procedures or medical care</td>
<td>$58,188,295</td>
<td>1.6</td>
</tr>
<tr>
<td>Acute cerebrovascular disease (stroke)</td>
<td>$57,348,929</td>
<td>1.6</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>$54,880,243</td>
<td>1.5</td>
</tr>
<tr>
<td>Fracture of neck of femur (hip fracture)</td>
<td>$50,502,591</td>
<td>1.4</td>
</tr>
<tr>
<td>Biliary tract disease (gall bladder disease)</td>
<td>$45,566,320</td>
<td>1.3</td>
</tr>
<tr>
<td>Nonspecific chest pain</td>
<td>$45,006,783</td>
<td>1.2</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>$42,513,220</td>
<td>1.2</td>
</tr>
<tr>
<td>Diabetes mellitus with complications</td>
<td>$42,085,275</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total for top 20 conditions</strong></td>
<td><strong>$1,846,852,475</strong></td>
<td><strong>50.9</strong></td>
</tr>
</tbody>
</table>
The top 20 principal diagnoses with the highest aggregate inpatient hospital costs accounted for 50.9 percent of the $3.6 billion total cost for all hospital stays in Oklahoma in 2006.

The most costly diagnoses:

- The number one costly condition for Oklahoma hospitals in 2006 was coronary atherosclerosis, which accounted for 5.6 percent of all hospital costs.

- Of the top 20 conditions with the highest aggregate costs, four conditions, three of which were in the top 5, were related to conditions of the heart: coronary atherosclerosis (5.6 percent), acute myocardial infarction (3.6 percent), congestive heart failure (3.4 percent), and cardiac dysrhythmias (2.0 percent). Combined this group of heart conditions amounted to more $500 million in hospital costs.

- Hospital stays for pneumonia accounted for approximately $138 million or 3.8 percent of all Oklahoma hospital costs in 2006.

- Two of the top 20 most costly conditions were related to complications of medical care: complication of medical device, implant or graft and complications of surgical procedures or medical care.
Hospital charges are reflected in the dollar amounts seen by patients when they receive a hospital bill. Because of negotiated discounts, these charges are rarely the amounts paid by patients for medical services. Nonetheless, charges may provide a rudimentary benchmark for examining relative expenditures for medical conditions.

- Diagnoses related to infants made up three of the top ten diagnoses with the highest charges per stay for 2006.

- The condition with the highest average charge per stay does not have to be the same condition with the highest average charge per day. This can be seen in the above graph where spinal cord injury has the highest average charge per stay ($109,243), while rupture of an injury has the highest average charge per day ($23,073). This likely reflects differences by condition in the length and complexity of hospital stays.

- Hospitalizations for premature birth and low birth weight were found to have the third highest average cost per stay ($89,748), but fell to near the bottom of the top 10 in terms of the highest average cost per day ($5,509).

- Only two conditions held the same position in the top 10 for highest charges per stay and per day: heart valve disorders (2nd highest) and leukemias (6th highest).
SECTION 5

UNINSURED INPATIENT HOSPITAL STAYS

EXHIBIT 5.1 Admission Source and Discharge Status
In 2006, uninsured hospital discharges, those not covered by private insurance or public programs, accounted for more than six percent (approximately 32,000) of Oklahoma hospital discharges.

Admission source:

- Nearly two-thirds (64 percent) of uninsured hospital stays are admitted through emergency departments, compared to 38 percent of insured hospital stays that are admitted to hospital in this manner.

Discharge status:

- A larger percentage of insured admissions (12.6 percent) than uninsured admissions (4.3 percent) were discharged to a nursing home.

- Hospital patients who were uninsured were 6 times more likely than insured patients to leave the hospital against medical advice.

- Nearly 28 percent of all discharges that left the hospital against medical advice were uninsured.

- Patients having health insurance were 3.5 times more likely to be discharged to home health services than were those patients lacking health insurance.

- Uninsured patients (1.4 percent) were less likely than insured patients (2.3 percent) to die in the hospital.
SOURCES AND METHODS

Statistical Software
All data were prepared and analyzed using the SAS Version 9.1.3 statistical software. The SAS programs used to produce this report were obtained by request from the Agency for Healthcare Research and Quality (AHRQ), Rockville, MD. All SAS programs were modified to meet requirements of Oklahoma state-level data.

Unit of Analysis
In this report, the hospital stay, rather than the individual patient, is the unit of analysis. Statistics reported in the document reflect state-level data for hospital discharges occurring in calendar year 2006.

Coding Diagnoses and Procedures
The diagnosis and procedure codes for inpatient hospitalizations can be classified by a number of medical coding classification systems. The SAS programs used to produce this report incorporate four classification systems to identify diagnoses and procedures: International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), Clinical Classifications Software (CCS), Diagnosis Related Groups (DRGs), and Major Diagnostic Categories (MDCs).

The SAS software uses these four classification systems in combination to produce meaningful categories of diagnoses and procedures. These grouped categories make data analyses and data presentation more manageable. Codes used in this report have been grouped by section.

Section 2 – Diagnoses
Maternal CCS categories:
183 Hypertension complicating pregnancy, childbirth, and the puerperium (high blood pressure during pregnancy)
184 Early or threatened labor
185 Prolonged pregnancy
189 Previous C-section
190 Fetal distress and abnormal forces of labor
191 Polyhydramnios and other problems of amniotic cavity (excess amniotic fluid and other problems of amniotic cavity)
192 Umbilical cord complication
193 Trauma to external female genitals (vulva) and area between anus and vagina (perineum)
196 Normal pregnancy and/or delivery

Other maternal CCS categories:
176 Contraceptive and procreative management (birth control or helping with conception)
177 Spontaneous abortion
178 Induced abortion
179 Postabortion complications (complications following abortion)
180 Ectopic pregnancy (abdominal or tubal pregnancy)
181 Other complications of pregnancy
182 Hemorrhage during pregnancy, abruption placenta, placenta previa (bleeding and placenta disorders during pregnancy)
186 Diabetes or abnormal glucose tolerance complicating pregnancy, childbirth, or the puerperium (diabetes or high blood glucose during pregnancy)
187 Malposition, malpresentation (breech birth and other disorders of baby’s position during birth)
188 Obstructed labor or fetopelvic disproportion
194 Forceps delivery
195 Other maternal complications of birth, puerperium affecting management of mother (other maternal complications of birth and period after childbirth)
Infant CCS categories:

- 218 Liveborn (newborn infant)
- 219 Short gestation, low birth weight, and fetal growth retardation (premature birth and low birth weight)
- 220 Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)
- 221 Infant respiratory distress syndrome
- 222 Hemolytic jaundice and perinatal jaundice (infant jaundice following birth)
- 223 Birth trauma
- 224 Other perinatal conditions (other conditions occurring around the time of birth)

Other circulatory CCS categories:

- 96 Heart valve disorders
- 97 Peri-, endo-, and myocarditis, cardiomyopathy (disorders of heart muscle and surrounding tissue, except that caused by tuberculosis or sexually transmitted disease)
- 98 Essential hypertension (high blood pressure)
- 103 Pulmonary heart disease (heart disease due to lung disorders)
- 104 Other and ill-defined heart disease
- 105 Conduction disorders (disturbance of electrical activity of heart)
- 107 Cardiac arrest and ventricular fibrillation (uncoordinated contraction of heart)
- 111 Other and ill-defined cerebrovascular disease (other blockage of brain blood supply)
- 113 Late effects of cerebrovascular disease (late effects of stroke)
- 115 Aortic, peripheral, and visceral artery aneurysms (ballooning or rupture of an artery)
- 116 Aortic and peripheral arterial embolism or thrombosis (arterial blood clots)
- 117 Other circulatory disease (other blood vessel disease)
- 119 Varicose veins of lower extremity (varicose veins in leg)
- 120 Hemorrhoids
- 121 Other diseases of veins and lymphatics (lymph system)

Exhibit 2.5

Circulatory CCS categories:

- 99 Hypertension with complications and secondary hypertension (high blood pressure with complications)
- 100 Acute myocardial infarction (heart attack)
- 101 Coronary atherosclerosis (coronary artery disease)
- 102 Non-specific chest pain
- 106 Cardiac dysrhythmias (irregular heart beat)
- 108 Congestive heart failure, nonhypertensive
- 109 Acute cerebrovascular disease (stroke)
- 110 Occlusion or stenosis of precerebral arteries (blockage of arteries before brain)
- 112 Transient cerebral ischemia (mini-stroke)
- 114 Peripheral and visceral atherosclerosis (hardening of arteries outside heart)
- 118 Phlebitis, thrombophlebitis, and thromboembilism (inflammation and blood clots in the veins)

Exhibit 2.6

Diabetes CCS categories:

- 49 Diabetes mellitus without complication
- 50 Diabetes mellitus with complications
Exhibit 2.7
Alcoholism and alcohol abuse ICD-9-CM codes:
291.0 Alcohol withdrawal delirium
291.1 Alcohol-induced persisting amnestic disorder
291.2 Alcohol-induced persisting dementia
291.3 Alcohol-induced psychotic disorder with hallucinations
291.4 Idiosyncratic alcohol intoxication
291.5 Alcohol-induced psychotic disorder with delusions
291.8 Other specified alcohol-induced mental disorders
291.81 Alcohol withdrawal
291.82 Alcohol-induced sleep disorders
291.89 Other
291.9 Unspecified alcohol-induced mental disorders
303.00 Acute alcoholic intoxication, unspecified
303.01 Acute alcoholic intoxication, continuous
303.02 Acute alcoholic intoxication, episodic
303.03 Acute alcoholic intoxication, in remission
303.90 Other and unspecified alcohol dependence, unspecified
303.91 Other and unspecified alcohol dependence, continuous
303.92 Other and unspecified alcohol dependence, episodic
303.93 Other and unspecified alcohol dependence, in remission
305.00 Alcohol abuse, unspecified
305.01 Alcohol abuse, continuous
305.02 Alcohol abuse, episodic
305.03 Alcohol abuse, in remission
357.5 Alcoholic polyneuropathy
425.5 Alcoholic cardiomyopathy
535.3 Alcoholic gastritis
535.31 Alcoholic gastritis, with hemorrhage
571.0 Alcoholic fatty liver
571.1 Acute alcoholic hepatitis
571.2 Alcoholic cirrhosis of liver
571.3 Alcoholic liver damage, unspecified
760.71 Noxious influences affecting fetus or newborn via placenta or breast milk, alcohol
790.3 Excessive blood level of alcohol
V11.3 Personal history of mental disorder, alcoholism
V79.1 Special screening for mental disorders and developmental handicaps, alcoholism

Exhibit 2.8
Mental health CCS categories:
650 Adjustment disorders
652 Attention-deficit, conduct, and disruptive behavior disorders
653 Delirium, dementia, and amnestic and other cognitive disorders
657 Mood disorders
659 Schizophrenia and other psychotic disorders
660 Substance-related disorders

Other mental health CCS categories:
651 Anxiety disorders
654 Developmental disorders
655 Disorders usually diagnosed in infancy, childhood, or adolescence
656 Impulse control disorders, not elsewhere classified
658 Personality disorders
661 Miscellaneous mental disorders

Exhibit 2.9
Injury CCS categories:
225 Joint disorders and dislocations, trauma-related
226 Fracture of neck of femur (hip fracture)
227 Spinal cord injury
228 Skull and face fractures
229 Fracture of upper limb (arm)
230 Fracture of lower limb (leg)
231 Other fractures
232 Sprains and strains
233 Intracranial injury (brain injury)
234 Crushing injury or internal injury
235 Open wounds of head, neck, and trunk
236 Open wounds of extremities (arms and legs)
239 Superficial injury, contusion (bruise)
240 Burns
241 Poisoning by psychotropic agents
242 Poisoning by other medications and drugs
Poisoning by nonmedicinal substances (substances other than medicine)

Other injuries and conditions due to external causes

Exhibit 2.11
Influenza CCS category:
123 Influenza

Section 3 – Procedures

Exhibit 3.3
Childbirth DRG categories:
370 Cesarean section with complications and comorbidities
371 Cesarean section without complications and comorbidities
372 Vaginal delivery with complicating diagnoses
373 Vaginal delivery without complicating diagnoses
374 Vaginal delivery with sterilization and/or dilation and curettage
375 Vaginal delivery with operating room procedure except sterilization and/or dilation and curettage

Within DRG 370-371 and 372-375, all-listed diagnoses were also subsetted using the following CCS diagnosis category:
189 Previous C-section

Exhibit 3.5
Cardiovascular CCS categories:
44 CABG coronary artery bypass graft, procedure to restore blood supply to the heart muscle
45 PTCA (percutaneous transluminal coronary angioplasty, procedure involving use of a balloon-tipped catheter to enlarge a narrowed artery)
51 Endarterectomy (surgical removal of an obstructing clot from the arteries of the neck and head)

In addition, abdominal aortic aneurysm repair was defined using the following ICD-9-CM procedures and diagnoses:
Any one of the following ICD-9-CM procedures:
38.34 Resection of aorta with anastomosis
38.44 Resection of abdominal aorta with replacement
38.64 Other excision of aorta
39.71 Endovascular implantation of graft in abdominal aorta
AND
Any one of the following ICD-9-CM diagnoses:
441.3 Abdominal aneurysm, ruptured
441.4 Abdominal aneurysm without mention of rupture

Exhibit 3.6
Bariatric surgery procedures were identified using these steps:
1) identify likely bariatric procedures using ICD-9-CM procedure codes; 2) identify additional likely stays for bariatric surgeries using a combination of DRG and ICD-9-CM categories; 3) remove stays where the procedures were performed because of cancer; and 4) eliminate cases where an obesity diagnosis was not present.

1) Bariatric procedures using ICD-9-CM procedure codes:
44.31 High gastric bypass
44.38 Laparoscopic gastroenterostomy
44.39 Other gastroenterostomy
44.68 Laparoscopic gastroplasty
44.69 Other
44.95 Laparoscopic gastric restrictive procedure
44.96 Laparoscopic revision of gastric restrictive procedure
44.97 Laparoscopic removal of gastric restrictive device(s)
44.98 (Laparoscopic) adjustment of size of adjustable gastric restrictive device
2) Additional likely stays for bariatric surgeries. If the DRG was equal to 288 (O.R. procedures for obesity), additional bariatric surgery procedures were defined using the following ICD-9-CM categories:
   44.5  Revision of gastric anastomosis
   44.99 Other operations on the stomach
   45.91 Small-to-small intestinal anastomosis

3) For all cases above, exclude cancer cases defined by the following ICD-9-CM diagnosis categories:
   150.0-159.9 Malignant neoplasm of digestive organs and peritoneum
   230.1-230.9 Carcinoma in situ of digestive organs

4) Exclude cases without one of the following ICD-9-CM diagnostic codes for obesity:
   278.0 Obesity
   278.00 Obesity, unspecified
   278.01 Morbid obesity
   V77.8 Obesity

Exhibit 3.7
Orthopedic procedure CCS categories:
   142  Partial excision of bone
   145  Treatment of fracture or dislocation of radius and ulna (lower arm)
   146  Treatment of fracture or dislocation of hip and femur
   147  Treatment of fracture or dislocation of lower extremity
        (leg, other than hip or femur)
   152  Arthroplasty of knee (surgical reconstruction or replacement of knee)
   153  Hip replacement, total and partial
   157  Amputation of lower extremity (leg, foot, or toe)
   158  Spinal fusion (correction of an unstable part of the spine
        by joining two or more vertebrae)

Other orthopedic procedure CCS categories:
   143  Bunionectomy (repair of toe deformities)
   144  Treatment of facial fracture or dislocation
   148  Other fracture and dislocation procedure
   149  Arthroscopy (procedure to view the inside of a joint
        through a lighted tube and to diagnose and treat problems)
   150  Division of joint capsule, ligament or cartilage
   151  Excision of semilunar cartilage of knee
   154  Arthroplasty other than hip or knee (surgical reconstruction
        or replacement of other joints)
   155  Arthocentesis (procedure that involves introducing a needle
        into a joint to remove joint fluid)
   156  Injections and aspirations of muscles, tendons, bursa,
        joints, and soft tissue
   159  Other diagnostic procedures on musculoskeletal system
   160  Other therapeutic procedures on muscles and tendons
   161  Other operating room therapeutic procedures on bone
   162  Other operating room therapeutic procedures on joints
   163  Other non-operating room therapeutic procedures on
        musculoskeletal system
   164  Other operating room therapeutic procedures on
        musculoskeletal system
DEFINITIONS

Admission source
Admission source indicates where the patient was located prior to admission to the hospital.
  Routine admission: Patient was admitted to the hospital from home, via physician or clinic referral, or due to birth (i.e., newborns). It does not include patients who were admitted from the emergency department or any other health care facility.
  Emergency department admission: Patient was admitted to the hospital through the emergency department.
  Long-term health care facility admission: Patient was admitted to the hospital from a long-term health care facility.
  Other hospital admission: Patient was admitted to the hospital from another hospital.
  Other admissions: Patient was admitted through court/law enforcement or other admission sources.

Adjusted for inflation
Cost can be adjusted for economy-wide inflation by removing increases that reflect the effect of changing average prices for all goods and services. In this report, the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index is used to remove economy-wide inflation. Additional inflation that is specific to the hospital sector is not removed in this calculation. Data shown in Exhibit 1.1 and 4.1 are adjusted for economy-wide inflation.

Aggregate costs
These costs reflect the sum of all costs for hospital stays.

Charges
Hospital charges reflect the amount the hospital billed for the entire hospital stay and do not include professional fees. The charge is generally more than the amount paid to the hospital by payers for the hospitalization and is also generally more than the hospital’s costs of care.

Acute care hospitals
An acute care hospital is characterized as a short-term medical facility containing the services, medical staff and personnel to provide diagnosis and treatment of a disease or condition. Acute care is defined over a short time period for which the patient is treated for a brief but severe episode of illness.

Costs
Costs are derived from total hospital charges using cost-to-charge ratios based on hospital accounting reports from the Centers for Medicare and Medicaid Services (CMS). Costs will tend to reflect the actual costs to produce hospital services, while charges represent what the hospital billed for the case. For each hospital, a hospital-wide cost-to-charge ratio is used to transform charges into costs.

Diagnoses
  Principal diagnosis: The condition established after study to be chiefly responsible for the patient’s admission to the hospital.
  All-listed diagnoses: The principal diagnosis plus secondary conditions.
Discharge
Discharge refers to the hospital stay. The unit of analysis for this report is the hospital discharge, not a person or patient. This means that person who is admitted to the hospital multiple times in one year will be counted each time as a separate discharge from the hospital.

Discharge status
Discharge status indicates the disposition of the patient at the time of 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, rehabilitation care, swing bed, and another type of facility such as a nursing home), home health care, against medical advice (AMA), or died in the hospital.

Discharge per population
Discharge per population is the hospital discharge rate of a particular procedure, diagnosis, or event per 100,000 individuals. This measure indicates the prevalence of hospitalizations, procedures or diagnoses within the population.

In-hospital deaths
In-hospital deaths refer to hospitalizations in which the patient died during his or her hospital stay.

Infant discharges
Infant discharges are hospital stays during which a child is born.

Length of stay
Length of stay is the number of nights the patient remained in the hospital for his or her stay. A patient admitted and discharged on the same day has a length of stay equal to 0.

Maternal discharges
Maternal discharges are hospital stays for females who are pregnant or gave birth.

Median income
Median income is the median household income of the patient’s ZIP Code of residence. This is a proxy measure of a patient’s socioeconomic status.

Morbid obesity
Morbid obesity is defined as at least twice a person’s ideal weight, 100 pounds overweight, or a body mass index (BMI) that is greater than 39.

Neonates
Neonates are newborns and infants 30 days of age or less.

Ownership/control
Ownership/control information was obtained from the Oklahoma Hospital Association (OHA). This information includes categories for government non-Federal (public), private not-for-profit (voluntary), and private investor-owned (proprietary). These types of hospitals tend to have different missions and different responses to government regulations and policies.
Patient age
Patient age in years, calculated based on the patient’s date of birth and admission date to the hospital.

Payers
Payer is the expected payer for the hospital stay. To make coding uniform, Payer combines detailed categories into more general groups:

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

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

Procedures
**Principal procedure** is the procedure that was performed for definitive treatment rather than one performed for diagnostic or exploratory purposes (i.e., the procedure that was necessary to take care of a complication). If two procedures appear to meet this definition, the procedure most related to the principal diagnosis is selected as the principal procedure.

**All-listed procedures** include all procedures performed during the hospital stay.

Stays
The unit of analysis for Oklahoma inpatient discharge data is the hospital stay (i.e., the hospital discharge), not a person or patient. This means that a person who is admitted to the hospital multiple times in one year will be counted each time as a separate “discharge” from the hospital.
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