



STATISTICAL BRIEF

October 2009

Reasons for Being Admitted to the Hospital through the Emergency Department for Children and Adolescents, 2007

In 2007, children and adolescents under 18 years of age (pediatric) accounted for 624,666 (21.3 percent) of the nearly 3 million total hospital stays in Texas. Over half of pediatric hospitalizations were related to births and maternal care. Excluding these cases, nearly 30 percent of the remaining pediatric stays (90,287 hospitalizations) were admitted through the emergency department (ED).

Figure 1 shows percent distribution of the most common reasons for pediatric admission to the ED and includes that for adult admission to the ED as a comparison. Respiratory disorders were twice as likely to be seen among pediatric hospitalizations (28.6 percent) compared with adult hospitalizations (14.3 percent). Digestive disorders were the next common reason for which the admission rate for pediatric stays was also higher than for adult stays (17.2 percent versus 12.6 percent). Nervous system conditions accounted for 7.7 percent of pediatric hospitalizations that was slightly lower than for adult hospitalizations (8.2 percent).

Table 1 presents the top 20 most frequent specific conditions for which children and adolescents were admitted to the hospital through the ED. These 20 conditions accounted for over two-thirds of all pediatric admissions through the ED. Pneumonia was the single most condition accounting for 9.5 percent of all pediatric admissions through the ED. This was followed by two conditions also related to the respiratory system—acute bronchitis (8.2 percent) and asthma (7.4 percent). These top three conditions together accounted for one-quarter of all pediatric admissions through the ED. Appendicitis and skin conditions ranked 4th and 5th with 5.8 percent and 4.9 percent of pediatric admissions through the ED, respectively.

The reasons for children and adolescents admitted through the ED varied by age group (Figure 2 and Table 2). For the youngest children (under one year of age), respiratory conditions—mainly acute bronchitis, pneumonia, and asthma—comprised 35.8 percent of stays that began in the ED. This percentage slightly increased to 39.2 percent for 1-4 year olds, then dropped to 29.3 percent for 5-9 year olds and declined even further for 10-14 year olds (13.9 percent) and 15-17 year olds (7.7 percent). Digestive disorders were more likely to be seen for children ages 10-14 years (nearly 24 percent), compared with other age groups—about 20 percent for 5-9 and 15-17 year olds and about 15 percent for 0-4 year olds. Admissions for infectious diseases cases decreased

with age among children and adolescents—the admission rate was about 14 percent for children under one year of age and it substantially dropped to about 3 percent for children ages 1-17 years.

For children under one year of age, acute bronchitis was the single most common condition for hospital stay accounting for over 1 in 5 admissions through the ED. Pneumonia and asthma were the two most common conditions for children ages 1-9 years admitted through the ED (over 1 in 4 admissions for either condition). Appendicitis was the most common condition for children ages 10-17 years admitted through the ED (about 1 in 6 stays for 10-14 year olds and 1 in 9 stays for 15-17 year olds).

Adults were admitted to the hospital from the ED for different conditions than children and adolescents (Table 3). While respiratory conditions were largely responsible for such admissions in the pediatric population, adults were most frequently admitted to the ED for circulatory system disorders. Heart-related conditions, such as congestive heart failure, chest pain, heart attack, stroke, irregular heart beat, and coronary atherosclerosis, accounted for nearly 20 percent of all adult stays that began in the ED. This is most likely due to the chronic nature of many circulatory diseases that render them less common in the pediatric population. However, similar to younger patients, conditions of the respiratory and digestive systems accounted for a large portion of stays that originated in the ED among adults (Figure 1). One specific condition that was the most common in both adult and pediatric admissions through the ED was pneumonia, which accounted for 5.1 percent of adult stays and 9.5 percent of pediatric stays.

Table 1. Top 20 most frequent conditions for admission to the ED for children and adolescents, 2007*

Rank	Principal diagnosis	Number of admissions through the ED	Percentage of all admissions through the ED
1	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	8,565	9.5%
2	Acute bronchitis	7,393	8.2%
3	Asthma	6,649	7.4%
4	Appendicitis and other appendiceal conditions	5,215	5.8%
5	Skin and subcutaneous tissue infections	4,446	4.9%
6	Other perinatal conditions	3,079	3.4%
7	Fluid and electrolyte disorders	3,070	3.4%
8	Urinary tract infections	2,825	3.1%
9	Epilepsy, convulsions	2,576	2.9%
10	Intestinal infection	2,058	2.3%
11	Other upper respiratory infections	2,052	2.3%
12	Mood disorders	2,029	2.2%
13	Fracture of upper limb (arm)	1,715	1.9%
14	Fever of unknown origin	1,591	1.8%
15	Viral infection	1,541	1.7%
16	Fracture of lower limb (leg)	1,469	1.6%
17	Intracranial injury	1,463	1.6%
18	Noninfectious gastroenteritis	1,458	1.6%
19	Diabetes mellitus with complications	1,251	1.4%
20	Meningitis (except that caused by tuberculosis or sexually transmitted disease)	1,063	1.2%
Top 20 most frequent conditions admitted through the ED		61,508	68.1%
All other conditions admitted through the ED		28,779	31.9%
Total admissions through the ED for children and adolescents		90,287	100.0%

* Includes individuals under 18 years of age and excludes births and maternal cases.

Source: Texas Hospital Inpatient Discharge Public Use Data File (PUDF), 2007.

Table 2. Top 5 specific conditions for admission to the ED for children and adolescents, by age group, 2007*

Age group	Principal diagnosis	Number of admissions through the ED	Percentage of all admissions through the ED
Under 1 year	Acute bronchitis	5,340	21.5%
	Other perinatal conditions	3,061	12.3%
	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	1,974	7.9%
	Urinary tract infections	1,390	5.6%
	Fever of unknown origin	1,108	4.5%
1-4 years	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	4,086	16.1%
	Asthma	3,018	11.9%
	Acute bronchitis	1,909	7.5%
	Skin and subcutaneous tissue infections	1,887	7.4%
	Fluid and electrolyte disorders	1,552	6.1%
5-9 years	Asthma	2,122	14.7%
	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	1,625	11.3%
	Appendicitis and other appendiceal conditions	1,492	10.4%
	Skin and subcutaneous tissue infections	686	4.8%
	Fracture of upper limb (arm)	664	4.6%
10-14 years	Appendicitis and other appendiceal conditions	2,039	15.9%
	Asthma	908	7.1%
	Mood disorders	671	5.2%
	Skin and subcutaneous tissue infections	605	4.7%
	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	576	4.5%
15-17 years	Appendicitis and other appendiceal conditions	1,311	11.5%
	Mood disorders	721	6.3%
	Skin and subcutaneous tissue infections	572	5.0%
	Fracture of lower limb (leg)	453	4.0%
	Diabetes mellitus with complications	423	3.7%

* Includes individuals under 18 years of age and excludes births and maternal cases.

Source: Texas Hospital Inpatient Discharge Public Use Data File (PUDF), 2007.

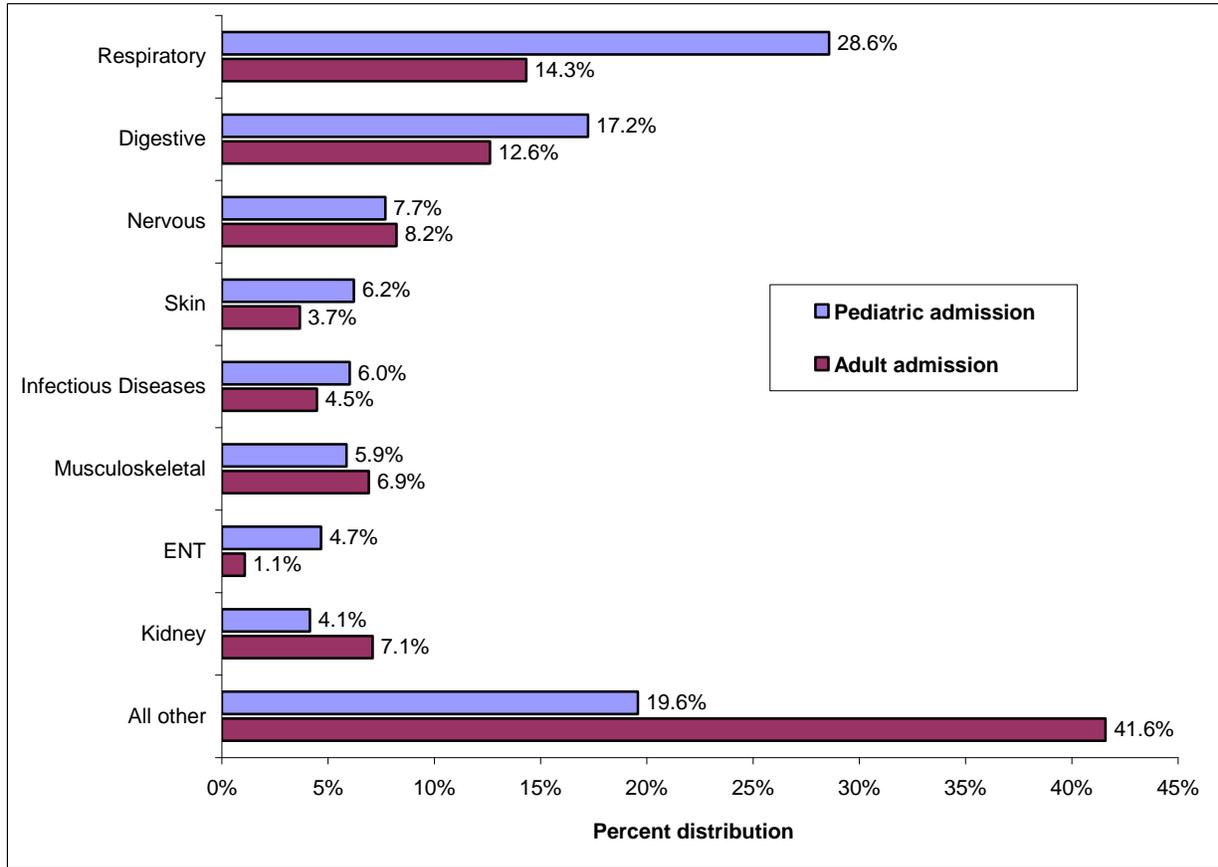
Table 3. Top 20 most frequent conditions for admission to the ED for adults, 2007*

Rank	Principal diagnosis	Number of admissions through the ED	Percentage of all admissions through the ED
1	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	49,940	5.1%
2	Congestive heart failure, nonhypertensive	48,895	5.0%
3	Septicemia (except in labor)	34,703	3.5%
4	Nonspecific chest pain	32,480	3.3%
5	Acute myocardial infarction (heart attack)	27,859	2.8%
6	Acute cerebrovascular disease (stroke)	27,640	2.8%
7	Urinary tract infections	27,627	2.8%
8	Skin and subcutaneous tissue infections	26,362	2.7%
9	Chronic obstructive pulmonary disease and bronchiectasis	25,454	2.6%
10	Cardiac dysrhythmias (irregular heart beat)	24,935	2.5%
11	Diabetes mellitus with complications	24,796	2.5%
12	Coronary atherosclerosis and other heart disease	24,611	2.5%
13	Biliary tract disease	23,228	2.4%
14	Fluid and electrolyte disorders	22,396	2.3%
15	Respiratory failure, insufficiency, arrest (adult)	17,191	1.8%
16	Acute and unspecified renal failure	16,802	1.7%
17	Fracture of neck of femur (hip)	15,936	1.6%
18	Gastrointestinal hemorrhage	15,817	1.6%
19	Complication of device, implant or graft	15,791	1.6%
20	Pancreatic disorders (not diabetes)	15,621	1.6%
Top 20 most frequent conditions admitted through the ED		518,084	52.8%
All other conditions admitted through the ED		464,001	47.2%
Total admissions through the ED for adults		982,085	100.0%

* Includes individuals over 17 years of age and excludes maternal cases.

Source: Texas Hospital Inpatient Discharge Public Use Data File (PUDF), 2007.

Figure 1. Percent distribution of the most common reasons for pediatric admission to the ED, compared with that for adult admission to the ED, 2007*

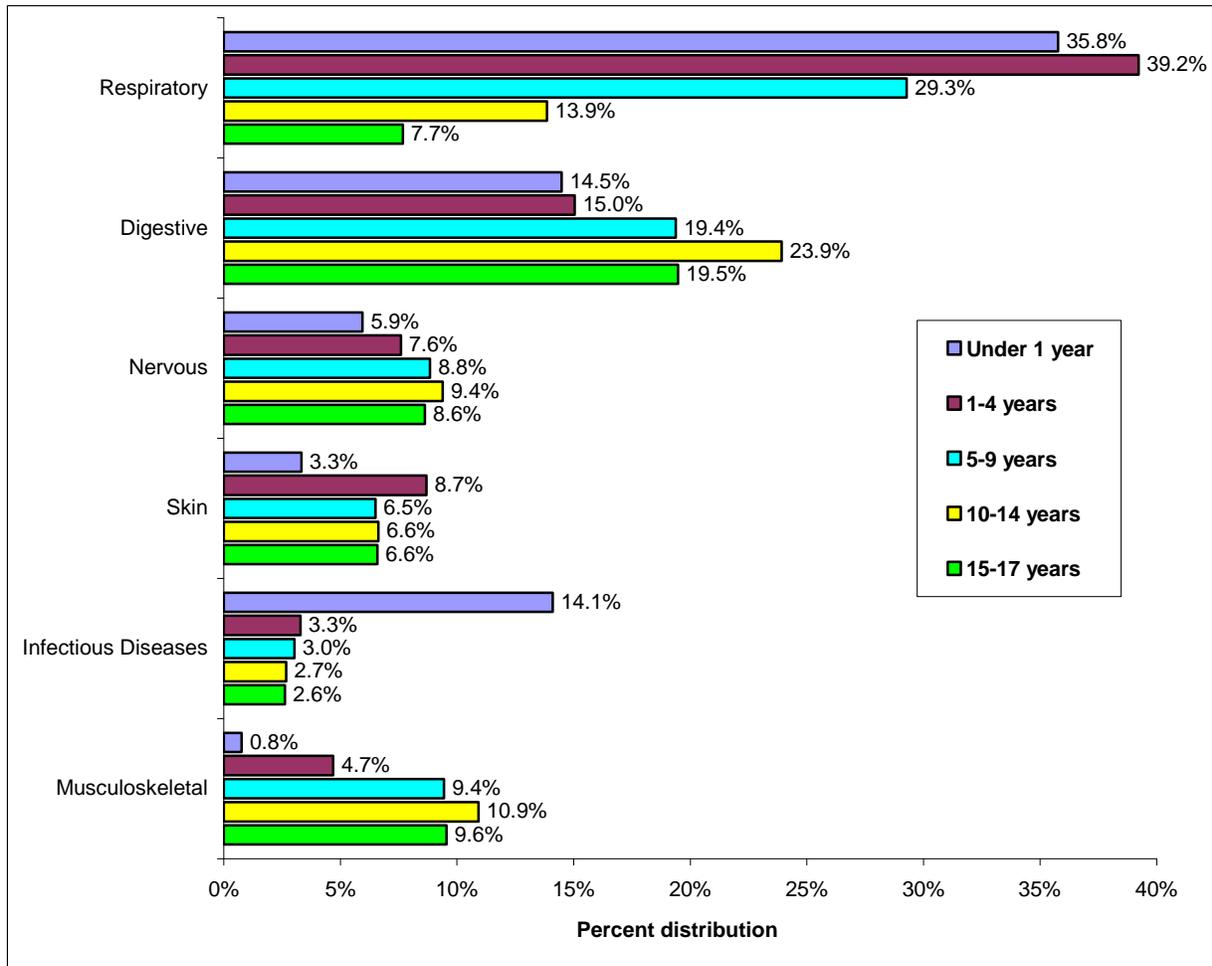


* Based on APR-MDC; excludes births and maternal cases.

Pediatric admissions are defined as stays for individuals under 18 years of age and adult admissions include stays for individuals greater than 17 years of age.

Source: Texas Hospital Inpatient Discharge Public Use Data File (PUDF), 2007.

Figure 2. Percent distribution of the most common reasons for pediatric admission to the ED, by pediatric age group, 2007*



* Based on APR-MDC; excludes births and maternal cases.

Pediatric admissions are defined as stays for individuals under 18 years of age.

Source: Texas Hospital Inpatient Discharge Public Use Data File (PUDF), 2007.