

Statistical Brief #12

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New York State All Payer Inpatient Hospital Discharges and Emergency Room Visits for Children Under 18 Years, 2013

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Introduction

In 2012, children under the age of 18 accounted for nearly 5.9 million hospital discharges in the United States.¹ Of these, 3.9 million or 66 percent were infants born during the hospital stay.¹ Nearly half of the hospitalizations were covered by Medicaid and the most frequent reason for the hospitalization was for a respiratory disorder.¹ During 2010, over 25.5 million emergency room visits in the United States were for children under the age of 18 with injury and poisoning as the most common reason for visit.²

This Statistical Brief provides a snapshot of the inpatient hospital discharges and emergency room “treat and release” visits (visits not resulting in an inpatient admission) for children at New York State hospitals during 2013. Statistics are presented separately for inpatient discharges and emergency room visits.

Methods

A child’s age was calculated at the time of the inpatient discharge or emergency room visit. A child may be represented numerous times in these findings, as the unit of analysis is the discharge/visit, not the patient.

Inpatient Discharges

Hospital inpatient discharge data from the Statewide Planning and Research Cooperative System (SPARCS) were used to identify all discharges in New York State from Article 28 (acute care) hospitals. Inpatient discharges were analyzed from January 1, 2013 through December 31, 2013. The discharges were limited to children under the age of 18 years old with newborns and newborn transfers being excluded. This exclusion resulted in the youngest age in the study cohort being eight days old.

Highlights

- During 2013 in NYS, there were 362,360 hospital discharges for children under the age of 18 years, accounting for 15% of all inpatient discharges. Of these discharges, 64 percent were newborn discharges.
- In 2013, excluding newborn discharges, children represented 5% of all hospital inpatient care and 22% of all same day ER visits.
- While 42% of children under the age of 18 in New York State live in NYC, NYC accounted for 59% of inpatient care and ER visits for children under the age of 18.
- Nearly two-thirds of inpatient care (64%) and ER visits (63%) are paid by Medicaid or Child Health Plus.
- The most frequent reasons why children are admitted to the hospital are asthma, respiratory conditions (including pneumonia), seizures and nausea, and vomiting.
- The most frequent reasons why children are visiting the ER are for respiratory infections, injuries, wounds and ear infections.
- Injuries account for 27% of pediatric ER visits. Of all injuries seen in the ER for children, the most common is a result of a fall, followed by being struck by or against an object.

The inpatient discharges were processed through the Agency of Healthcare Research and Quality (AHRQ) Pediatric Quality Indicators (PDI) logic and the 3M Potentially Preventable Readmissions (PPR) grouper. Version 4.5 of the AHRQ software was used for the PDI logic to determine discharges for four ambulatory sensitive conditions, which could have been potentially preventable. Version 31.0 of the 3M PPR software was used to identify potentially preventable readmissions among inpatient discharges. Please refer to the AHRQ web site³ and NYSDOH OQPS Statistical Brief #3⁴ for more complete descriptions of the PDI and PPR logic.

Emergency Room Visits

Emergency room (ER) visits were identified from SPARCS outpatient discharge records with a revenue code indicating emergency room care (UB-92 Revenue of 0450, 0451, 0452, 0456, 0459). These discharges were from Article 28 (acute care) facilities in New York State from January 1, 2013 through December 31, 2013. ER visits that resulted in an inpatient admission to the same facility become part of the inpatient discharge data findings. Similar to the inpatient analysis, ER visits were limited to children under the age of 18 years and excluded newborns, newborn transfers and babies less than one day old.

Data Source

SPARCS is a comprehensive all payer hospital discharge data reporting system established in 1979 as a result of cooperation between the health care industry and government. SPARCS currently collects claim level detail on patient characteristics, diagnoses, treatments, services, and charges for every hospital discharge, ambulatory surgery visit, and emergency department visit in New York State. More information on SPARCS may be found on the DOH public website at: <http://www.health.ny.gov/statistics/sparcs/>.

Findings

Inpatient Discharges

During 2013, there were 362,360 hospital discharges for children under the age of 18 years, accounting for 15.0% of all inpatient discharges. Of these discharges, 233,371 or 64.4 percent were for infants born during the hospital stay. Excluding newborns and newborn transfers, during 2013 there were 125,114 hospital inpatient discharges for children under 18 years from New York State hospitals, or 5.2 percent of all discharges.

Figure 1 illustrates the number of pediatric inpatient discharges by age. Even with newborn events excluded, discharges for children less than 1 year represent the largest number of hospital discharges. The total number of pediatric inpatient discharges decreased between the ages of 1 and 10, but then increased for children ages 11 through 17 years.

Table 1 and Figure 1a describe pediatric inpatient hospital discharges by age and gender, along with rates per 100 discharges. The breakdown of total pediatric inpatient discharges between females and males is very similar. However, when comparing gender within age, the distribution between females and males changes as age increases. The distribution is fairly consistent through age 12, at which point the rate of discharges for females begins to increase at a higher rate than males.

Figure 2 shows the pediatric inpatient discharges by the Health Service Areas (HSA) of New York State. More than three quarters of the pediatric inpatient discharges occurred at hospitals in New York City (58.5%) and the immediate surrounding areas - Long Island (9.7%) and Mid-Hudson (9.6%). The remaining discharges were distributed evenly throughout the rest of the state, with a range of 5-6% per region.

Figure 3 illustrates that children of white, non-Hispanic descent accounted for the largest percentage of race/ethnicity among pediatric inpatient discharges (35.3%) in 2013. The next largest group was Hispanic (23.8%), followed by Black, non-Hispanic (22.6%). The Asian race/ethnicity group represented a very small portion of pediatric inpatient discharges (3.7%). The remaining race/ethnicity groups analyzed were considered part of the Other race/ethnicity category (14.5%).

Figure 4 shows distribution of pediatric discharges by primary payer. The majority (61.0%) of the pediatric inpatient discharges were reimbursed by Medicaid (non-CHP) insurance, followed by private insurance (31.1%). Discharges reimbursed by Child Health Plus (CHP) represented only 2.0% of all pediatric discharges.

All Patient Refined Diagnosis Related Groups (APR-DRGs) represent the patient's condition at discharge. Pediatric Inpatient discharges were more often classified as medical discharges than surgical discharges, as demonstrated by APR-DRG. In 2013, over 80% of the pediatric inpatient discharges had a medical APR-DRG compared to only 20% with a surgical APR-DRG. When analyzed by age group, the percent of medical discharges decreases and the surgical discharges increases for the age group 5-9 years and older ([Figure 5](#)).

The pediatric inpatient discharges were further analyzed by APR-DRG to determine the major reason for the hospital stay. [Table 2](#) lists the ten most frequent reasons for the hospital stay by age group. The most frequent reason for a pediatric inpatient hospital stay was asthma, driven heavily by children under the age of ten. However, when analyzed by age group, bronchiolitis and respiratory syncytial virus (RSV) pneumonia was the most frequent APR-DRG for children less than 1 year. The most common APR-DRG for 10-14 year olds was appendectomy. When examined by gender in the older age groups, the most common APR-DRG for males 10 to 14 years of age was appendectomy and bipolar disorders for females in the same age group. In the oldest pediatric age group, 15-17 years, bipolar disorders was the most common APR-DRG for males and vaginal delivery for females.

Pediatric inpatient discharges with surgical procedures represented 17.9% of all the discharges. The primary ICD-9 procedure for each discharge was summed by age group in [Table 3](#). Pyloromyotomy was the most frequent procedure in children under 28 days old, accounting for 49.1% of the surgical discharges in this age group. This was also the most frequent procedure in the 28 days to under 1 year age group at 11.4%. Tonsillectomy/ adenoidectomy was the most frequent procedure for children aged 1-4 years. Laparoscopic appendectomy was by far the most frequent procedure in both the 5-9 year old and 10-14 year old age groups at 20.2% and 23.2% respectively. Repair of an obstetric laceration was the most frequent procedure (14.4%) followed closely by laparoscopic appendectomy at 13.9% in the 15-17 year old age group.

The overall average length of stay was 4.4 days, with 55% of the discharges lasting 2 days. The length of stay was longer for surgical discharges (5.5 days) compared to medical discharges (4.2 days). Discharges were longer for younger children, under the age of one, who had a surgical procedure compared to older children who had a surgical procedure. Conversely, older children had longer medical stays than younger children ([Figure 6](#)).

PDIs measure ambulatory sensitive conditions for people under 18 years of age. The most common PDI was asthma, followed by gastroenteritis, urinary tract infection (UTI) and diabetes with short term complications. UTI and diabetes were more common in females than males, while gastroenteritis and asthma discharges were more common in males than females ([Figure 7](#)). Differences by race/ethnicity were also detected within PDI discharges ([Figure 8](#)). Asthma discharges were most frequently found in Black, non-Hispanic children, where diabetes and gastroenteritis discharges were more frequent for White, non-Hispanic children. Hispanic children had more discharges for urinary tract infections than any other race/ethnicity group.

The overall PPR rate in 2013 for children was 4.1 per 100 discharges. This rate was lower than the New York State PPR rate for all ages, which was 6.7 per 100 discharges.⁵ Among children, the younger the age group, the lower the PPR rate, with children under 28 days old having a PPR rate of only 3.0 per 100 discharges. The rate increases to the highest rate, 5.1 per 100 discharges in the 10-14 year old age group, but then decreases to 4.2 per 100 discharges for the oldest age group, 15-17 year olds ([Figure 9](#)).

Emergency Room Visits

During 2013, there were 1,428,433 treat and release ER visits for children under the age of 18 years, accounting for 22.3% of all treat and release ER visits. Of these visits, injuries accounted for 27.2% of total visits. These visits are commonly referred to as treat and release visits because the ER visit did not result in an inpatient admission. The ages of the children using the ER reflects the same trend as inpatient discharges ([Figure 10](#)). The high number of ER visits in the youngest age group steadily decreased with increasing age until age of 11, when it became almost three times less of the volume for youngest age group. From age 11 and up, there was a slight increase in the number of ER visits.

Until age 14, the highest proportion of ER visits was males. After age of 14, the larger proportion of ER visits was females. The distribution of ER visits by region was the same as for inpatient discharges. The distribution of visits by payer was also very similar to the payer distribution for inpatient discharges with Medicaid being

the most frequent primary payer. [Figure 11](#) shows the distribution of ER visits by payer. Almost 63 percent of all visits were paid for by Medicaid or Child Health Plus. Private commercial insurance covered about a quarter of all visits, and 8.0 percent of pediatric visits were self-pay/uninsured.

[Figure 12](#) displays the trend of admission time for the emergency room visits. There were two peak times noted for ER pediatric visits. One is between 10am and 1pm and another is between 4pm and 9pm with both peaks being more pronounced on weekdays. On Saturday and Sunday, the majority of ER visits occurred between 11am and 9pm. Children younger than 29 days had visits more often than any other age group during the late night hours (11pm-4am), while children 10-14 years had ER visits more often than any other age group from 11am to 9pm ([Figure 13](#)).

The primary diagnosis for the ER visits differ between the younger and older age groups. In the younger age groups, the most frequent visits were for infections, such as upper respiratory infections, whereas for older children the most common reasons were injury related. At age 10, the most frequent primary diagnosis shifts from infections to sprains and strains ([Table 4](#)).

The most common procedure performed in the emergency room, regardless of age was suture of skin and subcutaneous tissue ([Table 5](#)). The second most frequent procedure was therapeutic procedures for the hemic and lymphatic systems for children under 29 days and incision and drainage of skin and subcutaneous tissue for all the other age groups.

Over a quarter (27.2%) of the ER visits had an external cause of injury (ICD-9-CM E-code) that reflected an injury occurred. The most common injuries, as shown in [Figure 14](#), were falls (32.1%) followed by being struck by or against an object (21.8%). More males than females had an injury code (58.0%) recorded during their ER visit. The three most common causes were the same for both genders, falls, struck by/against and overexertion ([Table 6](#)). This was further broken down by age group ([Table 7](#)) to illustrate what causes of injuries were most frequent in each age group. Falls are the most frequent injury in children under the age of 14. Over 15 years old, the most frequent injury for children is being struck by or against an object, followed by falls. Overexertion became third most frequent injury (7%) treated in ER starting from age 10.

Many of the ER visits were not treat and release visits, they resulted in the patient being admitted to the hospital. By adding the number of ER treat and release visits and the number of inpatient discharges that were admitted through ER, the true number of ER visits was obtained. Overall, 5.4% of all ER visits resulted in an inpatient admission. [Figure 15](#) trends the proportion of visits that resulted in an inpatient admission by age group. The highest percentage of children who were seen in ER and were subsequently admitted to the inpatient setting were children under 28 days old (11.1%). This proportion changes for children 1-17 years, with the percentage of admissions declining to the range of 4.2% to 5.8%.

The APR-DRG of the children in the inpatient setting were analyzed to determine if the percent of visits that were direct inpatient admissions differed from the inpatient admissions via the ER. [Figure 16](#) illustrates the percent of inpatient discharges that were direct hospital admissions versus those discharges that were admitted through the ER, by APR-DRG and age group. As shown previously, the most frequent reasons for hospital admission varied with age. Fever was in the top five reasons for admission only for children under 29 days old. Eighty seven percent of children under 29 days with the fever APR-DRG were admitted to the hospital via ER. The range for percent of hospital admissions through ER for the top five APR-DRGs for those under the age of 1 year, but older than 29 days, was very stable: 81.0% - 86.2%. Half of the children (49.2%) between age 1 and 4 years with seizures were admitted directly to the hospital, while only about a third (34.1%-37.2%) of the children with seizures, aged 5 and older were admitted through the ER. For those older than 5 years, the most frequent condition where a child was in the ER prior to hospital admission was appendectomy (88.7%). Mental health conditions become one of the most frequent APR-DRGs for children from age 10 and up with 42.7% - 50.0% being a direct admission to the inpatient setting.

Conclusions

There were 125,114 hospital inpatient discharges for children under the age of 18 from New York State hospitals during 2013, excluding newborns and newborn transfers. Children younger than 1 year represented the largest proportion of these discharges. The majority of inpatient discharges occurred at hospitals in New York City and were paid for by Medicaid. The most frequent reason for an inpatient hospital stay was asthma, with children under 10 years of age accounting for majority of discharges. Bronchiolitis and RSV pneumonia was the most frequent reason for hospitalizations for children under the age of 1, appendectomy for children 10-14 years old and vaginal delivery for children 15-17 years old.

There were 1,428,433 emergency room visits for children under the age of 18 during 2013. Weekdays, Monday through Friday, between 4 pm and 9 pm have the highest percentage of ER visits for children. In the younger age groups, the most frequent reasons for emergency room visits were infections, whereas for older children the visits were injury related. The most common injuries were falls, followed by being struck by or against an object. Overall, 5.4% of all ER visits resulted in admission to the inpatient setting. The most frequent condition where the child was in the ER prior to inpatient admission was appendectomy.

In New York State, the average length of stay for a pediatric inpatient stay is slightly longer than the national average. The average stay in New York is 4.4 days, while the national average, using H-CUP data, was 4.2 days for non-neonatal and non-maternal stays¹. Non-neonatal stays were already removed from this analysis of New York State data. By removing the maternal stays, the length of stay increases to 4.5 days in New York State hospitals.

There were a high number of ER visits during the day, especially from 11am to 5pm. This could indicate patients using the ER for routine care, or patients being directed to the ER by their primary care physician. Additionally, the largest number of ER visits occurred between 6-8pm, supporting the need for urgent care centers and physician offices with extended hours for routine, non-emergent care since the most frequent reason for a pediatric ER visit is a respiratory infection.

By understanding the characteristics of inpatient discharges and emergency room visits for children, public health programs and interventions could be designed to target these children to prevent hospitalizations and emergency room visits.

Figures and Tables

Figure 1. Pediatric Inpatient Discharges by Age, Excluding Newborn and Newborn Transfers, 2013

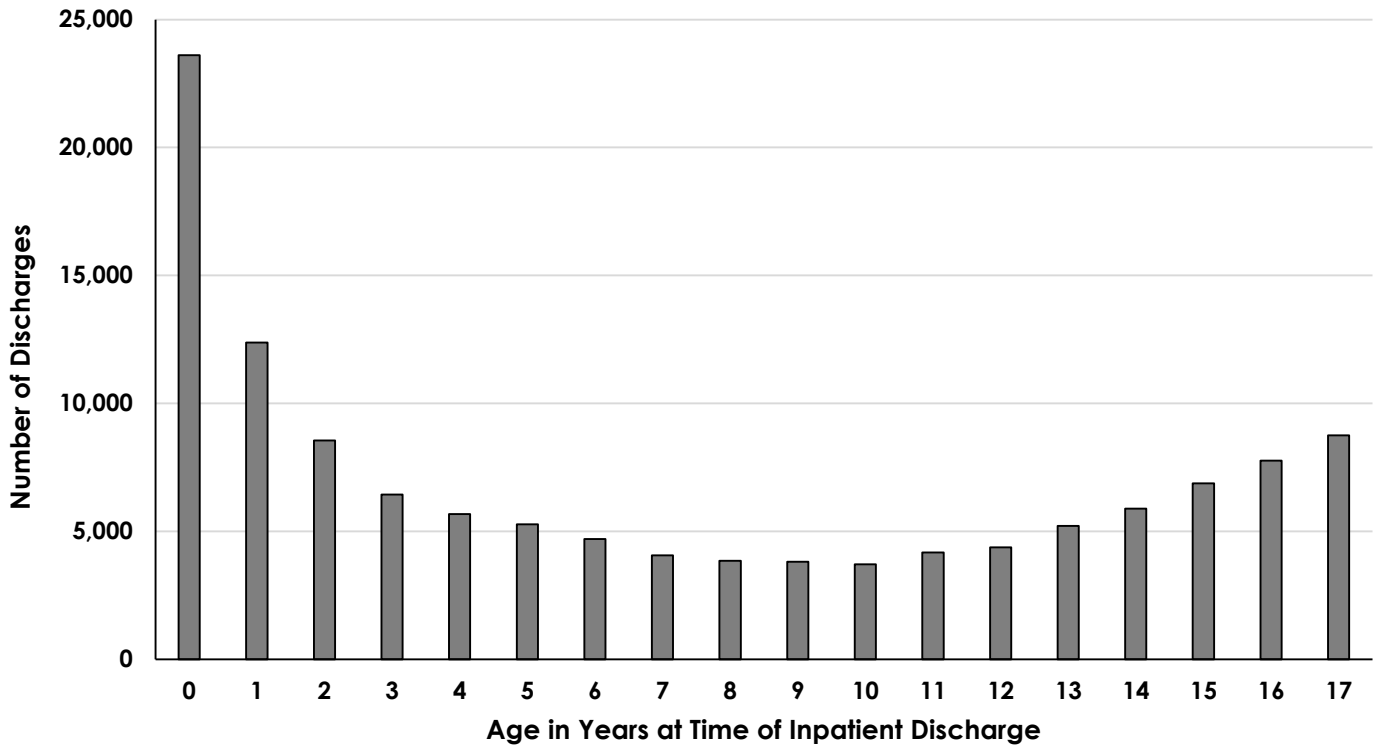


Table 1. Pediatric Inpatient Discharges by Age and Gender, 2013

Age in years	Female		Male		Total	
	Discharges	Rate per 100 Discharges	Discharges	Rate per 100 Discharges	Discharges	Rate per 100 Discharges
0	10,058	17.0	13,549	20.6	23,607	18.9
1	5,441	9.2	6,933	10.5	12,374	9.9
2	3,678	6.2	4,873	7.4	8,551	6.8
3	2,894	4.9	3,547	5.4	6,441	5.2
4	2,441	4.1	3,232	4.9	5,673	4.5
5	2,278	3.8	2,998	4.6	5,276	4.2
6	2,041	3.4	2,661	4.1	4,702	3.8
7	1,712	2.9	2,357	3.6	4,069	3.3
8	1,625	2.7	2,221	3.4	3,846	3.1
9	1,611	2.7	2,196	3.3	3,807	3.1
10	1,694	2.9	2,016	3.1	3,710	3.0
11	1,873	3.2	2,307	3.5	4,180	3.3
12	2,138	3.6	2,240	3.4	4,378	3.5
13	2,618	4.4	2,597	4.0	5,215	4.2
14	3,274	5.5	2,616	4.0	5,890	4.7
15	3,881	6.5	2,999	4.6	6,880	5.5
16	4,659	7.9	3,100	4.7	7,759	6.2
17	5,430	9.2	3,326	5.1	8,756	7.0
Total	59,345	100.0	65,767	100.0	125,114	100.0

Figure 1a. Pediatric Inpatient Hospitalization Rate per 100 Discharges by Age and Gender, 2013

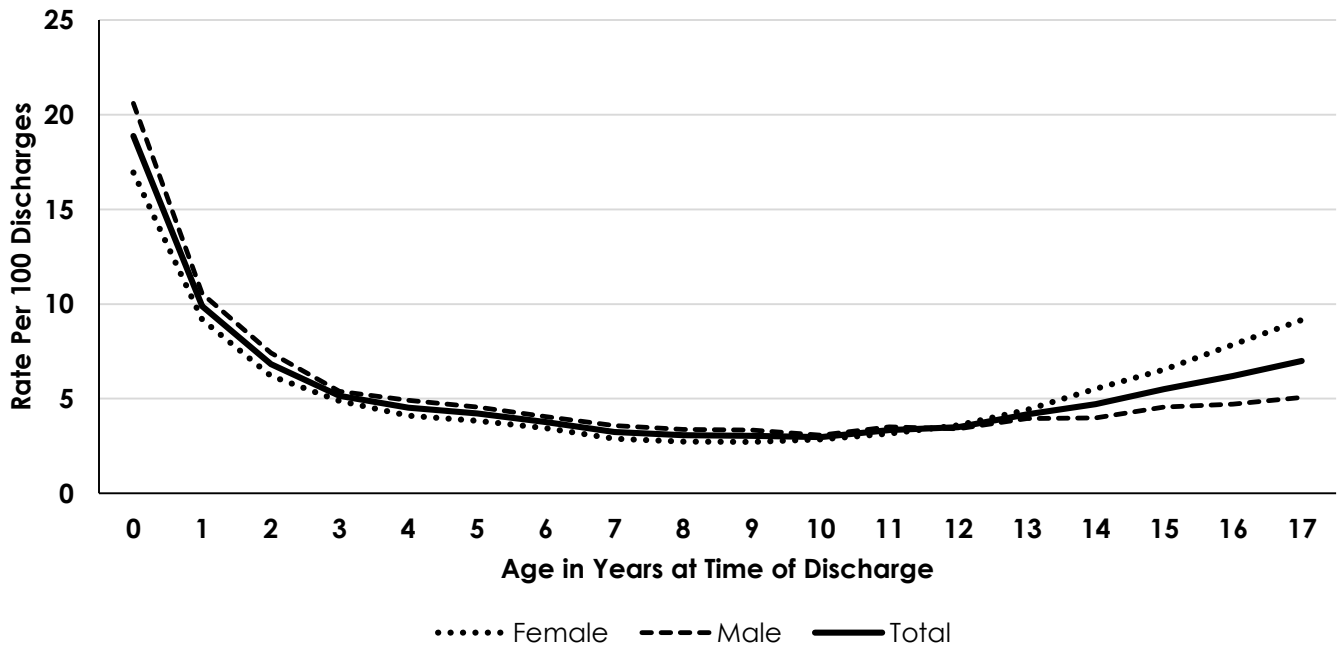


Figure 2. Pediatric Inpatient Discharges by NYS Health Service Area (HSA), 2013

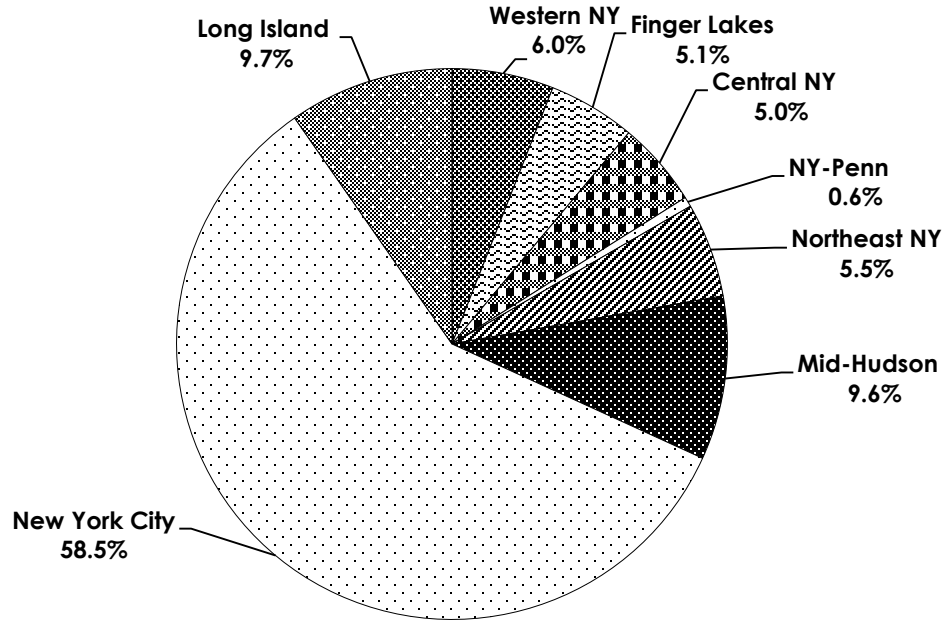


Figure 3. Pediatric Inpatient Discharges by Patient Race and Ethnicity, 2013

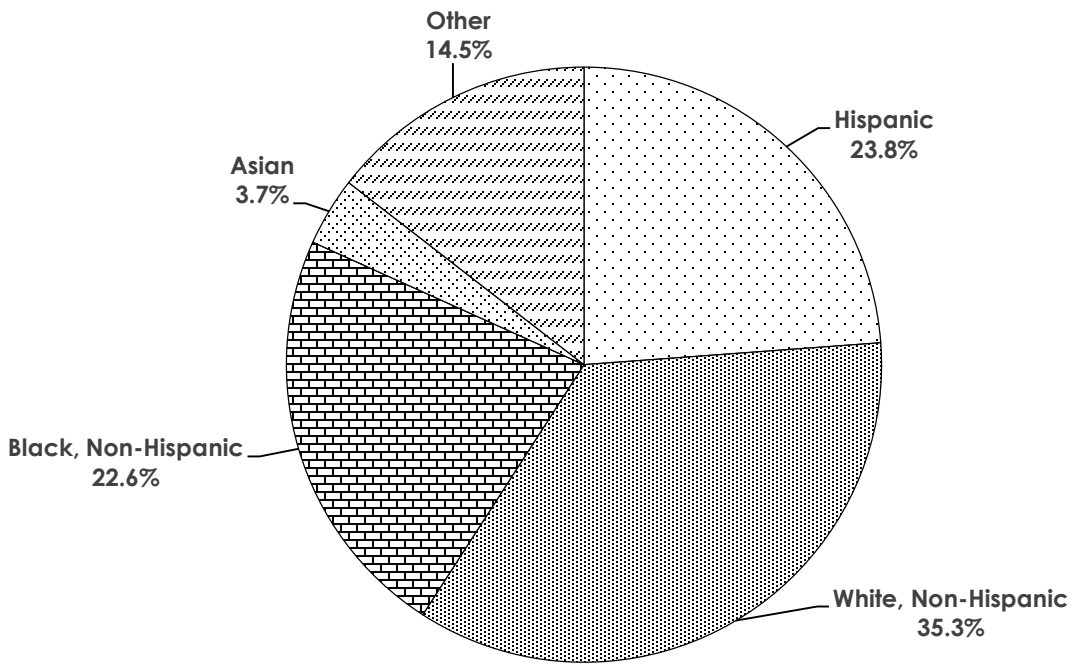


Figure 4. Pediatric Inpatient Discharges by Payer, 2013

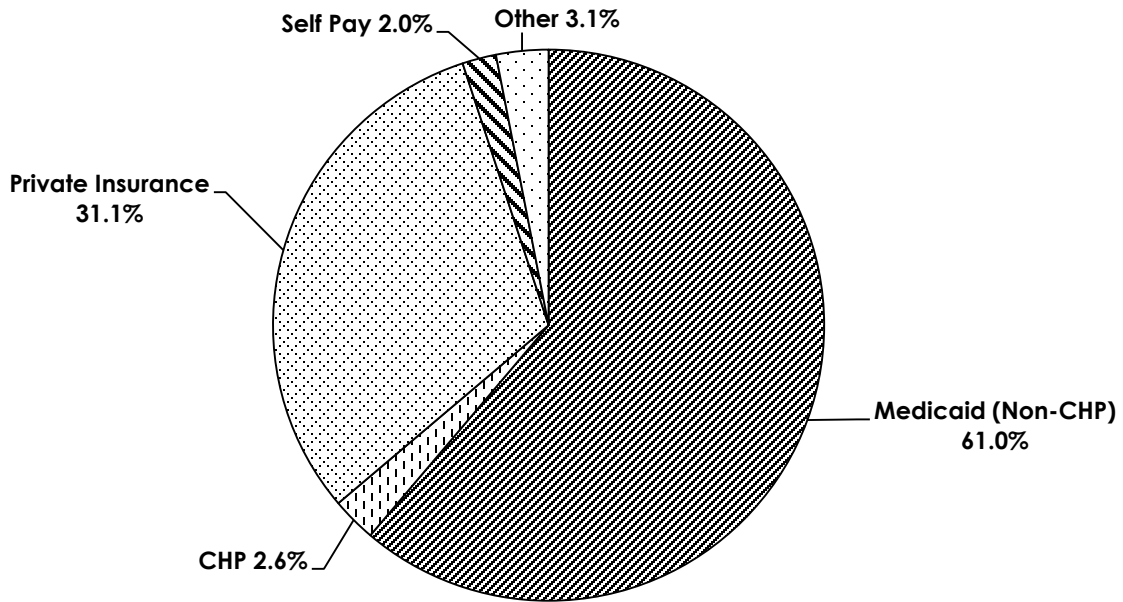


Figure 5. Pediatric Inpatient Discharges: Percent of Medical and Surgical APR-DRG Discharges by Age Group, 2013

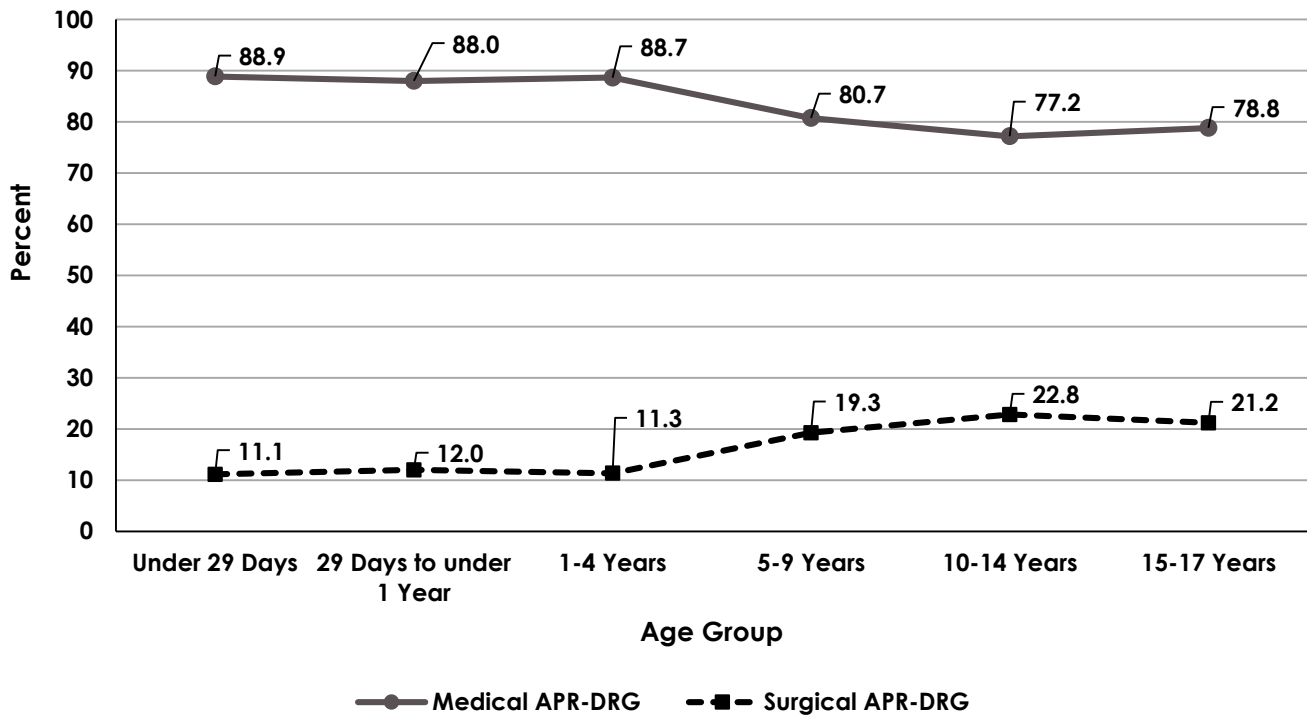


Table 2. Pediatric Inpatient Discharges: Ten Most Frequent APR-DRG by Age Group, 2013

Medical/ Surgical	APR-DRG Description	Discharges, %							Rank						
		Under 29 Days	29 Days to under 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total	Under 29 Days	29 Days to under 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
M	141-Asthma	0	1.8	15.7	15.0	6.5	2.6	8.7	-	12	1	1	2	6	1
M	138-Bronchiolitis and RSV pneumonia	10.6	26.0	7.2	0.2	0	0	6.5	2	1	4	68	180	219	2
M	53-Seizure	1.2	3.4	7.5	8.6	6.0	3.7	5.9	17	6	3	2	4	5	3
M	139-Other Pneumonia	0.3	4.8	9.0	4.8	1.7	0.7	4.5	41	4	2	5	14	27	4
M	249-Non-Bacterial Gastroenteritis, Nausea & Vomiting	1.1	4.6	6.0	4.9	1.8	1.2	3.8	21	5	5	4	12	18	5
S	225-Appendectomy	0	0	0.6	5.2	6.6	4.2	3.1	101	165	27	3	1	4	6
M	113-Infections Of Upper Respiratory Tract	2.1	5.6	4.6	2.2	1.0	0.8	2.9	12	2	6	9	23	24	7
M	383-Cellulitis & Other Bacterial Skin Infections	1.9	1.9	4.0	3.3	2.6	2.1	2.9	13	10	7	6	8	10	8
M	753-Bipolar Disorders	0	0	0	1.2	6.2	7.0	2.7	-	-	199	18	3	2	9
M	751-Major Depressive Disorders & Other/Unspecified Psychoses	0	0	0	0.2	4.4	6.9	2.2	-	-	220	73	5	3	10
M	560-Vaginal Delivery*	0	0	0	0	0	10.1	2.0	-	-	-	-	-	1	11
M	463-Kidney & Urinary Tract Infections	4.2	5.1	1.4	1.5	0.8	1.2	1.9	8	3	12	14	29	19	12
M	254-Other Digestive System Diagnoses	2.8	1.0	1.5	1.9	1.7	1.0	1.5	10	19	11	10	13	21	13
M	693-Chemotherapy	0	0.3	1.3	1.8	2.2	1.6	1.4	-	48	13	12	9	13	14
M	758-Childhood Behavioral Disorders	0	0	0.1	2.3	3.5	1.5	1.3	-	206	142	8	6	14	15
M	662-Sickle Cell Anemia Crisis	0	0.2	1.0	1.9	2.0	1.8	1.3	-	64	16	11	10	12	16
M	723-Viral Illness	1.6	3.0	1.6	1.0	0.6	0.6	1.3	14	8	10	20	37	39	17
M	420-Diabetes	0.1	0	0.5	1.4	2.9	2.0	1.3	78	176	36	15	7	11	18
M	422-Hypovolemia & Related Electrolyte Disorders	1.2	1.4	2.1	1.2	0.5	0.4	1.2	18	14	9	17	41	49	19
M	722-Fever	6.4	3.2	1.0	0.6	0.3	0.1	1.1	4	7	17	30	63	116	20
S	97-Tonsil & Adenoid Procedures	0	0.1	2.1	1.6	0.5	0.3	1.0	-	102	8	13	39	68	21
S	315-Shoulder, Upper Arm & Forearm Procedures	0	0	0.9	2.3	1.0	0.5	0.9	-	143	18	7	24	41	22
M	861-Signs, Symptoms & Other Factors Influencing Health Status	15.8	1.4	0.4	0.4	0.4	0.4	0.9	1	15	42	48	49	51	23
M	812-Poisoning Of Medicinal Agents	0.1	0.1	0.8	0.2	1.2	2.3	0.9	84	88	20	86	19	8	24

New York State Department of Health – Office of Quality and Patient Safety

Medical/ Surgical	APR-DRG Description	Discharges, %						Rank							
		Under 29 Days	29 Days to under 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total	Under 29 Days	29 Days to under 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
M	754-Depression Except Major Depressive Disorder	0	0	0	0.1	1.9	2.5	0.8	-	-	-	118	11	7	27
M	720-Septicemia & Disseminated Infections	3.7	1.1	0.5	0.6	0.6	0.4	0.7	9	17	34	33	38	53	28
M	421-Malnutrition, Failure To Thrive & Other Nutritional Disorders	5.1	1.8	0.5	0.2	0.1	0.1	0.6	6	11	37	81	102	163	29
M	143-Other Respiratory Diagnoses Except Signs, Symptoms & Minor Diagnoses	4.4	0.6	0.4	0.3	0.2	0.6	0.5	7	29	45	62	81	33	40
M	243-Other Esophageal Disorders	1.5	2.4	0.1	0.1	0.1	0.1	0.5	15	9	105	125	139	123	42
M	724-Other Infectious & Parasitic Diseases	7.4	0.3	0.3	0.5	0.3	0.2	0.5	3	49	56	36	60	94	44
S	540-Cesarean Delivery*	0	0	0	0	0	2.2	0.4	-	-	-	-	-	9	53
S	222-Other Stomach, Esophageal & Duodenal Procedures	5.6	1.4	0.1	0	0	0	0.4	5	13	140	174	204	238	58
Top 10 APR-DRG		66.0	60.0	59.8	50.5	42.9	43.6	43.2							
Remaining APR-DRG		34.0	40.0	40.2	49.5	57.1	56.4	56.8							

Note:

*Discharges for children under the age of 15 have been removed.

Bold numbers indicate the APR-DRG was in the top ten for that age group.

Table 3. Pediatric Inpatient Discharges: Five Most Frequent Primary Procedures by Age Group, 2013

Under 29 Days		29 Days to under 1 Year		1-4 Years		5-9 Years		10-14 Years		15-17 Years		Total	
ICD-9 Procedure	%	ICD-9 Procedure	%	ICD-9 Procedure	%	ICD-9 Procedure	%	ICD-9 Procedure	%	ICD-9 Procedure	%	ICD-9 Procedure	%
433-Pyloromyotomy	49.1	433-Pyloromyotomy	11.4	283-Tonsillectomy/ Adenoidectomy	14.9	4701-Laparoscopic Appendectomy	20.2	4701-Laparoscopic Appendectomy	23.2	7569-Repair Obstetric Laceration Nec	14.4	4701-Laparoscopic Appendectomy	13.8
640-Circumcision	7.4	5310-Bilateral Ing Hernia Repair Nos	2.9	7911-Closed Reduction-Internal Fixation Humerus	5.9	7911-Closed Reduction-Internal Fixation Humerus	7.1	8105-Dorsal and dorsolumbar fusion	6.4	4701-Laparoscopic Appendectomy	13.9	283-Tonsillectomy/ Adenoidectomy	4.3
0234-Ventricular Shunt- Abdomen	3.4	3885-Occlusion of Thoracic Vessels Nec	2.9	4701-Laparoscopic Appendectomy	3.3	283-Tonsillectomy/ Adenoidectomy	6.9	4709-Other Appendectomy	5.3	741-Low Cervical C- Section	8.1	7569-Repair Obstetric Laceration Nec	4.1
3834-Aorta Resection & Anastomosis	3.1	5587-Correct Ureteropelvic Junction	2.7	5674- Ureteroneocystostomy	3.0	4709-Other Appendectomy	6.3	7936-Open Reduction- Internal Fixation Tibia/Fibulia	2.8	736-Episiotomy	3.8	4709-Other Appendectomy	3.3
3885- Occlusion of Thoracic Vessels Nec	2.5	3581-Total Repair Tetralogy Fallot	2.6	2001-Myringotomy W Intubation	2.0	7931-Open Reduction-Internal Fixation Humerus	2.1	7855-Internal Fixation-Femur	1.7	8105-Dorsal and dorsolumbar fusion	3.8	8105-Dorsal and dorsolumbar fusion	2.7
Top 5 Procedures	65.5		22.5		29.1		42.6		39.4		44.0		28.2
Other Procedures	34.5		77.5		70.9		57.4		60.6		56.0		71.8

Figure 6. Pediatric Inpatient Discharges: Average Length of Stay by Medical and Surgical APR-DRG and Age Group, 2013

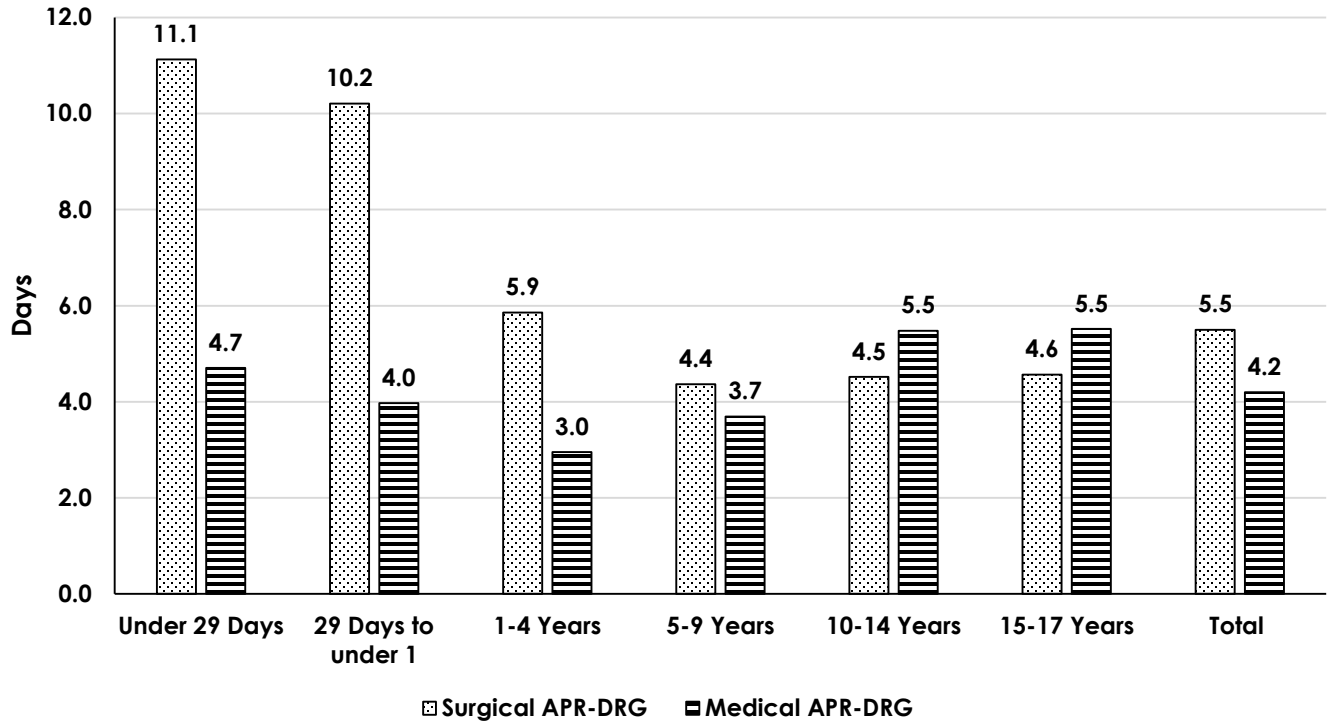


Figure 7. Pediatric Inpatient Discharges: Pediatric Quality Indicators (PDIs) by Gender, 2013

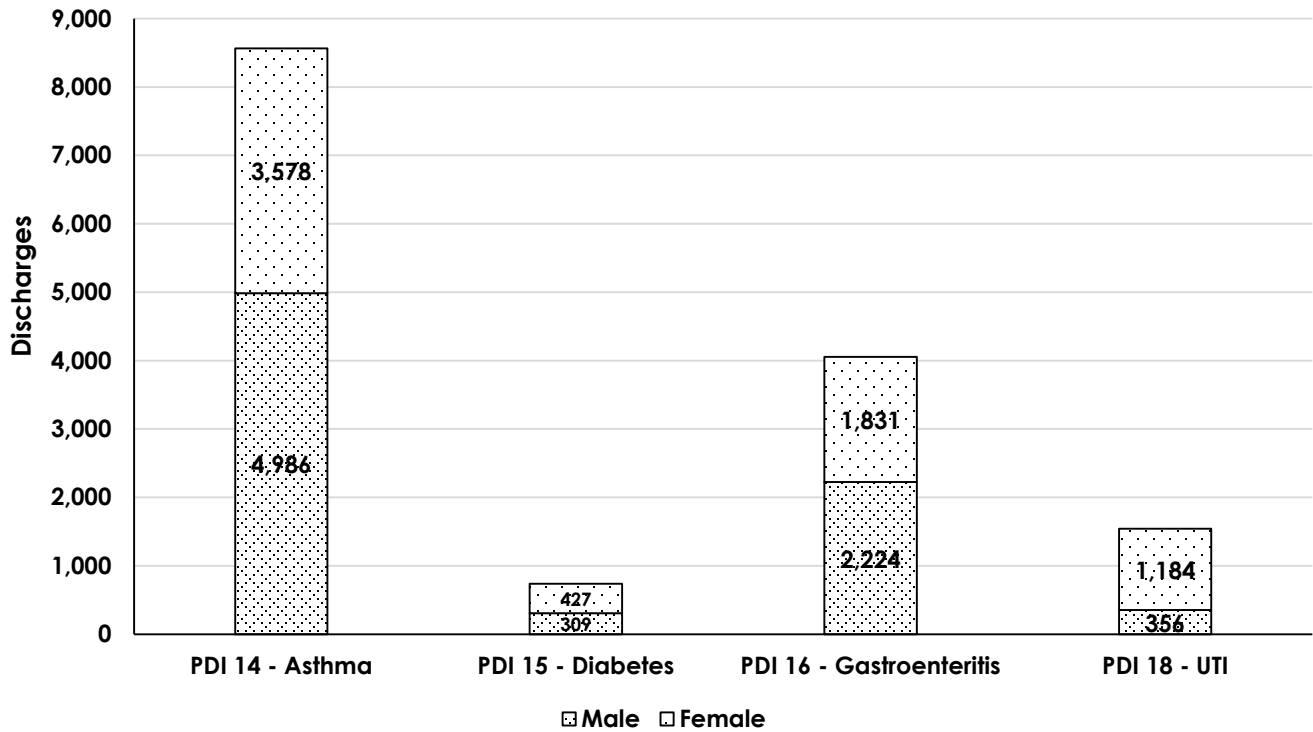


Figure 8. Pediatric Inpatient Discharges: Percent of Pediatric Quality Indicators by Race and Ethnicity, 2013

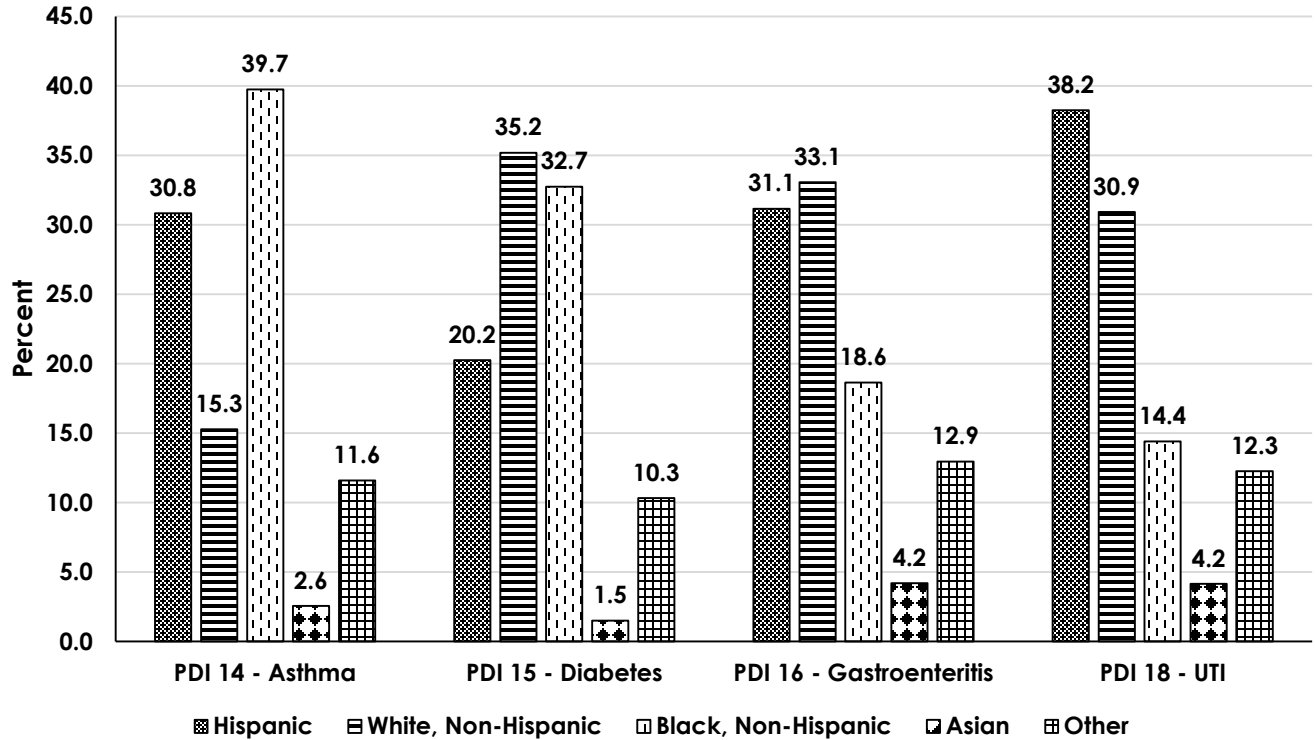


Figure 9. Pediatric Inpatient Discharges: 30 Day Potentially Preventable Readmission (PPR) Rate by Age Group, 2013

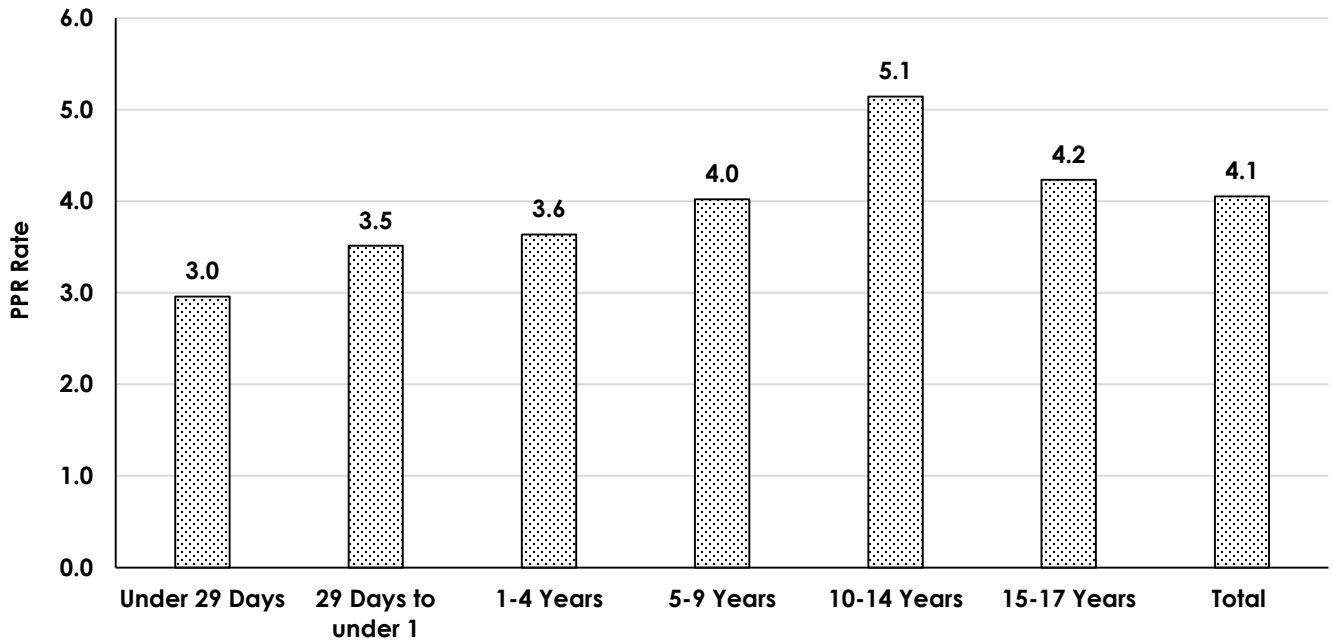


Figure 10. Pediatric Emergency Room Visits by Age and Gender, 2013

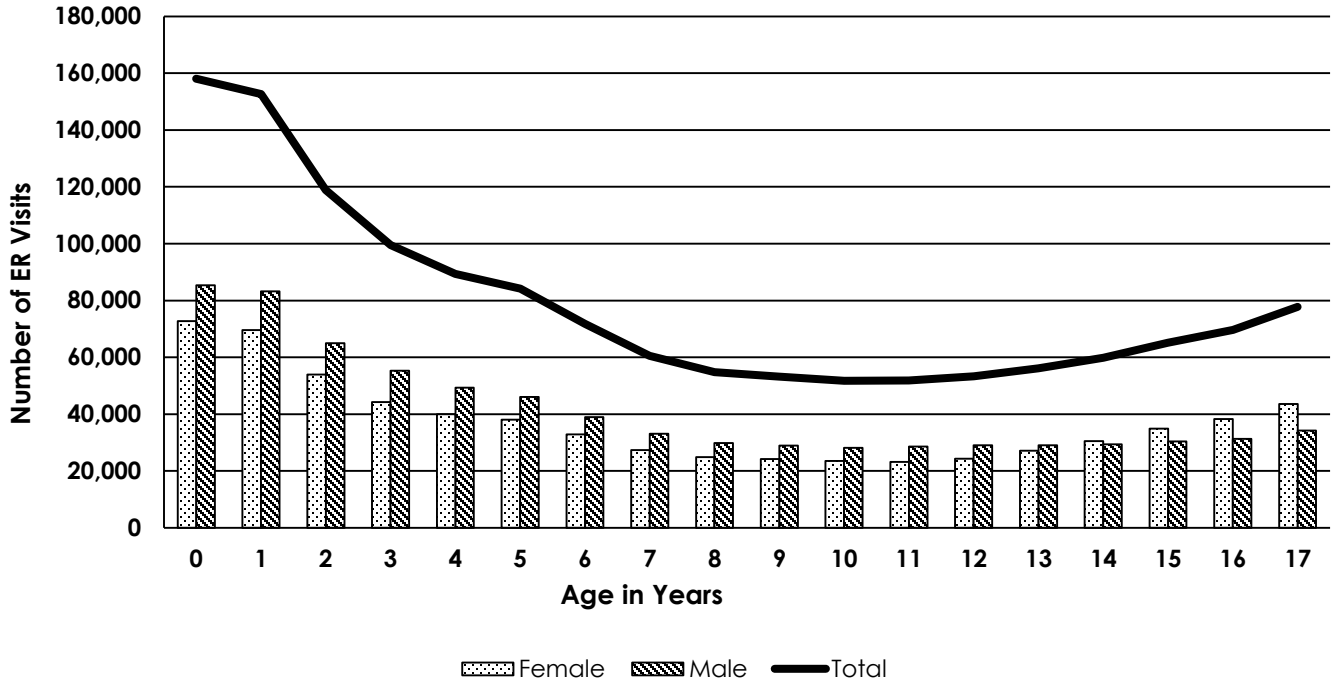


Figure 11: Pediatric Emergency Room Visits by Payer, 2013

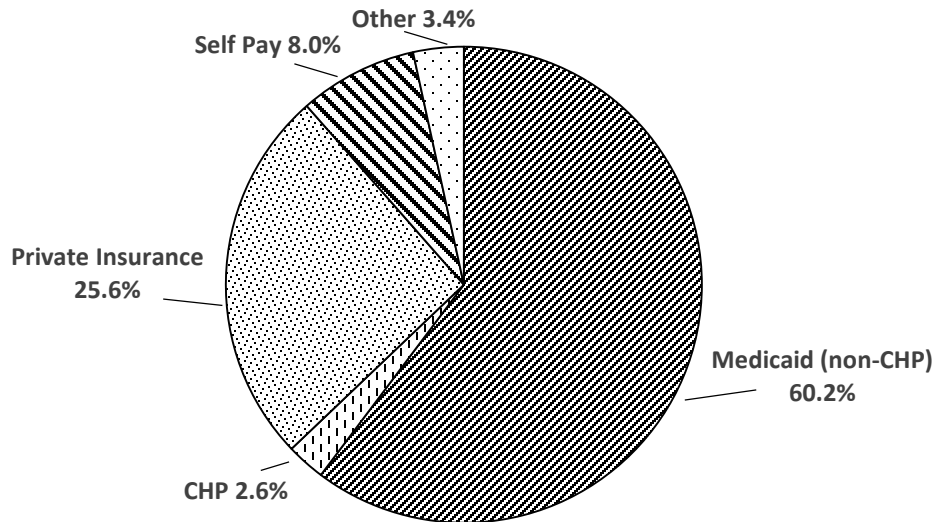


Figure 12. Pediatric Emergency Room Visits: by Admission Time and Day of the Week, 2013

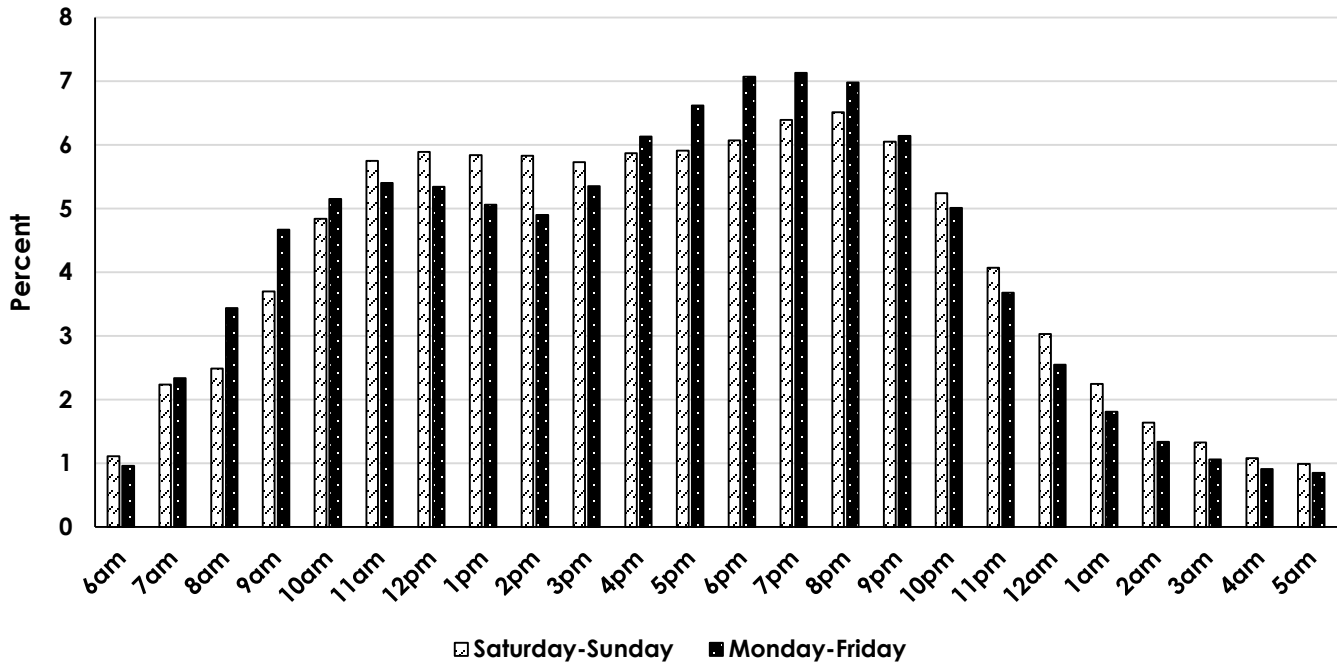


Figure 13. Pediatric Emergency Room Visits: Percent of Visits by Admission Time Within Age Group, 2013

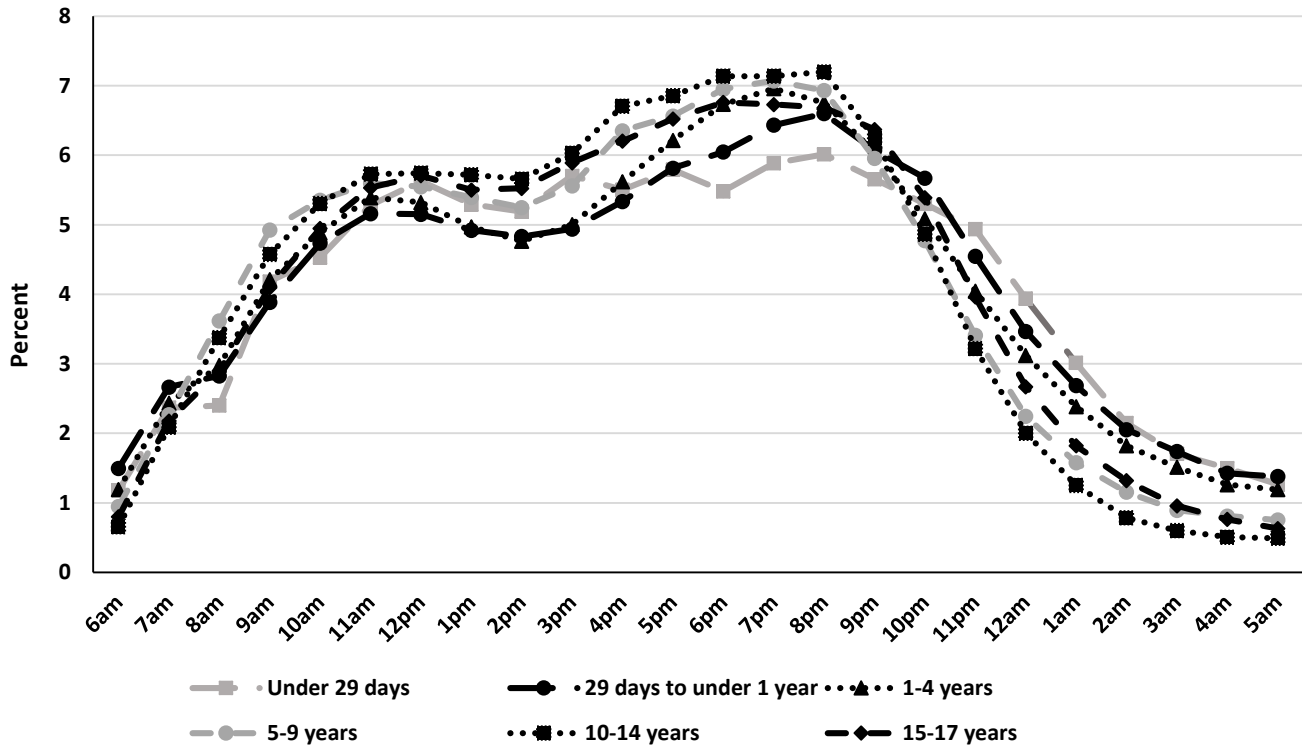


Table 4. Pediatric Emergency Room Visits: Five Most Frequent Primary Diagnosis CCS by Age Group, 2013

CCS Description	Discharges by Age Group, %							Rank by Age Group						
	Under 29 Days	29 Days to under 1 Year	1-4	5-9	10-14	15-17	Total	Under 29 Days	29 Days to under 1 Year	1-4	5-9	10-14	15-17	Total
Other upper respiratory infections	4.4	18.6	14.1	11.4	6.4	4.5	10.9	5	1	1	1	3	4	1
Superficial injury; contusion	0.6	2.4	5.0	6.3	8.3	7.1	5.9	24	11	7	2	2	2	2
Viral infection	0.7	9.6	8.4	5.3	2.5	1.8	5.6	22	2	2	5	10	15	3
Other injuries and conditions due to external causes	1.9	4.7	5.0	4.6	5.9	5.0	5.0	11	6	6	6	4	3	4
Otitis media and related conditions	0.1	6.3	7.7	4.4	1.5	0.7	4.5	57	4	3	7	20	39	5
Open wounds of head; neck; and trunk	0.1	0.6	6.2	5.6	2.8	2.6	4.3	49	27	4	4	9	8	6
Asthma	0	1.3	4.4	5.7	3.8	2.3	3.9	67	17	8	3	7	9	7
Fever of unknown origin	0.6	9.3	6.2	2.9	0.9	0.5	3.8	23	3	5	9	34	51	8
Sprains and strains	0.1	0.1	0.6	2.5	8.6	8.5	3.6	58	67	32	13	1	1	9
Abdominal pain	0.3	0.2	0.9	3.4	4.0	4.4	2.5	31	49	25	8	6	5	11
Other gastrointestinal disorders	6.8	3.6	2.3	2.3	1.7	1.2	2.2	3	8	13	14	15	23	12
Fracture of upper limb	0.1	0.1	1.0	2.7	4.6	2.3	2.2	45	56	23	11	5	11	14
Acute bronchitis	0.6	5.3	1.2	0.4	0.3	0.3	1.1	25	5	19	45	54	59	22
Other perinatal conditions	32.4	1.8	0	0	0	0	0.5	1	15	73	12	6	156	161
Administrative/social admission	6.5	1.1	0.3	0.2	0.2	0.2	0.4	4	20	47	57	68	76	48
Hemolytic jaundice and perinatal jaundice	12.5	0	0	0	0	0	0.1	2	91	-	-	-	-	77
Top 5 CCS	62.6	49.1	42.6	34.3	33.8	29.5	31.9							
Remaining CCS	37.4	50.9	57.4	65.7	66.2	70.5	68.1							

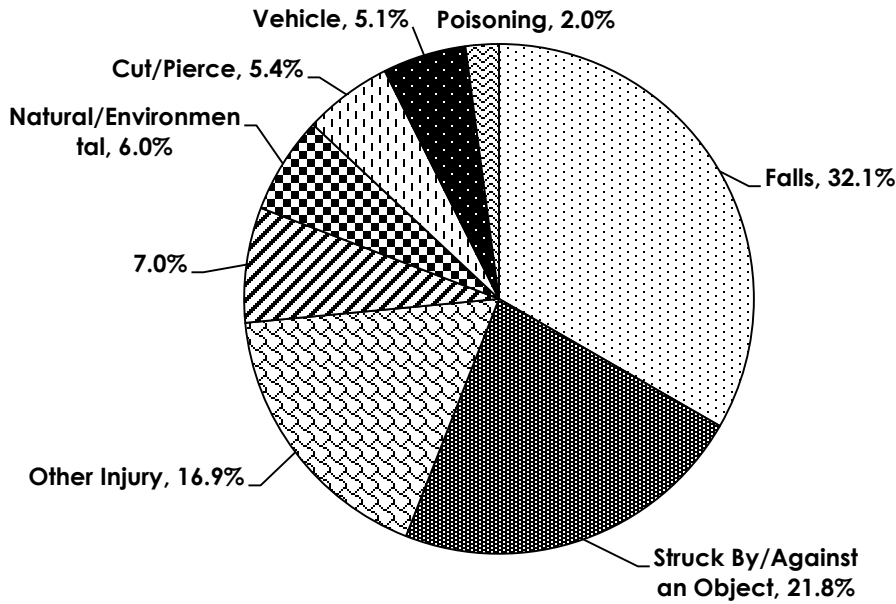
Note: Bold numbers indicate the CCS was in the top five for that age group.

Table 5. Pediatric Emergency Room Visits: Ten Most Frequent Procedure CCS by Age Group, 2013

CCS Description	Discharges, N							Rank						
	Under 29 Days	29 Days to 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total	Under 29 Days	29 Days to 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Suture of skin and subcutaneous tissue	14	538	21,743	17,041	10,830	8,296	58,462	1	1	1	1	1	1	1
Incision and drainage, skin and subcutaneous tissue	4	194	1,357	1,026	1,275	1,370	5,226	3	2	2	2	2	2	2
Debridement of wound, infection or burn	1	164	835	384	249	208	1,841	5	3	4	3	4	4	3
Non-operative removal of foreign body	0	18	1,255	233	71	65	1,642	-	6	3	6	8	7	4
Other non-OR therapeutic procedures on skin and breast	0	26	252	368	508	482	1,636	-	4	7	4	3	3	5
Other therapeutic procedures on eyelids, conjunctiva, cornea	0	14	418	309	161	118	1,020	-	9	5	5	5	5	6
Other OR therapeutic procedures on skin and breast	1	15	253	213	159	89	730	9	8	6	7	6	6	7
Skin graft	0	4	124	110	82	62	382	-	16	8	8	7	8	8
Other OR therapeutic procedures on nose, mouth and pharynx	0	0	96	48	53	56	253	-	-	10	11	10	10	9
Other non-OR therapeutic procedures on nose, mouth and pharynx	0	6	114	59	35	27	241	-	13	9	9	13	15	10
Appendectomy	0	0	4	32	70	59	165	-	-	26	13	9	9	11
Other fracture and dislocation procedure	0	1	27	51	13	14	106	-	30	13	10	18	20	15
Other diagnostic radiology and related techniques	0	22	28	8	7	3	68	-	5	12	20	23	32	19
Other OR lower GI therapeutic procedures	1	11	10	5	6	16	49	8	11	21	25	24	18	20
Other diagnostic procedures on skin and subcutaneous tissue	2	3	5	9	11	15	45	4	17	24	19	19	19	21
Other therapeutic procedures, hemic and lymphatic system	5	18	9	1	2	0	35	2	7	22	41	38	-	22
Nasogastric tube	0	13	10	3	3	4	33	-	10	19	31	31	25	23
Incision of pleura, thoracentesis, chest drainage	1	0	2	0	1	5	9	6	-	31	-	43	24	36
Laparoscopy	1	1	0	0	1	0	3	7	24	-	-	44	-	47
Other OR upper GI therapeutic procedures	1	1	0	0	0	0	2	10	29	-	-	-	-	57
Top 10 CCS	31	1,022	26,447	19,794	13,458	10,805	71,433							
Remaining CCS	1	59	285	304	325	363	1,461							

Note:
 Bold numbers indicate the CCS was in the top ten for that age group.

Figure 14. Pediatric Emergency Room Visits: Most Common Injuries by Percent of Injury Visits, 2013



*Other injury=sum of not specified, other specified classifiable and other specified not elsewhere classifiable
 Vehicle=sum of motor vehicle and other transportation
 Pedestrian=sum of pedal cyclist and pedestrian

Table 6. Pediatric Emergency Room Visits: Injury Related Emergency Visits by Gender, 2013

Injury Cause	Female		Male		Total	
	Visits	Rate per 100 Visits	Visits	Rate per 100 Visits	Visits	Rate per 100 Visits
Falls	52,497	32.2	72,219	32.1	124,716	32.1
Struck By/Against	29,040	17.8	55,702	24.8	84,742	21.8
Overexertion	13,067	8.0	14,277	6.3	27,344	7.0
Not Specified	10,787	6.6	13,881	6.2	24,668	6.4
Other specified, classifiable	11,715	7.2	12,836	5.7	24,551	6.3
Natural/Environmental	10,949	6.7	12,204	5.4	23,153	6.0
Cut/Pierce	8,474	5.2	12,565	5.6	21,039	5.4
Motor Vehicle	8,893	5.5	8,621	3.8	17,514	4.5
Other specified, not elsewhere classifiable	7,104	4.4	9,399	4.2	16,503	4.3
Poisoning	4,237	2.6	3,647	1.6	7,884	2.0
Pedal Cyclist	1,817	1.1	4,572	2.0	6,389	1.6
Fire/Burn	2,530	1.6	2,805	1.3	5,335	1.4
Other Transportation	1,006	0.6	1,275	0.6	2,281	0.6
Suffocation	515	0.3	468	0.2	983	0.3
Other Pedestrian	123	0.1	216	0.1	339	0.1
Machinery	76	0.1	169	0.1	245	0.1
Drowning	42	0.0	90	0.0	132	0.0
Firearm	17	0.0	109	0.1	126	0.0
Total Injuries	162,889	100.0	225,055	100.0	387,944	100.0

Table 7. Pediatric Emergency Room Visits: Most Frequent Injury Related Visits by Cause, 2013

Injury Cause	Percent of Total Visits, by Age						Rank					
	Under 29 Days	29 Days to under 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Under 28 Days	29 Days to under 1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years
Falls	34.7	52.5	41.0	36.2	27.7	18.2	1	1	1	1	1	2
Struck by/against an object	11.6	9.0	14.5	20.5	27.0	28.5	3	2	2	2	2	1
Natural/environmental	2.9	5.3	9.0	7.7	3.8	3.1	8	5	4	3	9	9
Other specified, classifiable	13.7	6.6	9.4	7.3	4.3	3.9	2	3	3	4	8	8
Cut/pierce	1.1	2.3	3.9	5.7	6.0	7.0	10	10	6	5	5	6
Not specified	7.9	6.5	5.9	5.6	6.6	7.5	4	4	5	6	4	5
Vehicle	6.9	4.3	2.6	4.2	4.3	7.8	6	6	10	7	7	4
Overexertion	0.7	1.7	3.2	4.0	10.3	12.3	11	11	9	8	3	3
Other specified, not elsewhere classifiable	7.4	3.8	3.4	3.6	4.7	5.6	5	8	7	9	6	7
Total Top 5 Injuries	75.3	79.9	79.8	77.4	77.6	74.2						

Figure 15. Pediatric Emergency Room Visits: Percent of Visits Resulted in Inpatient Admission, by Age Group, 2013

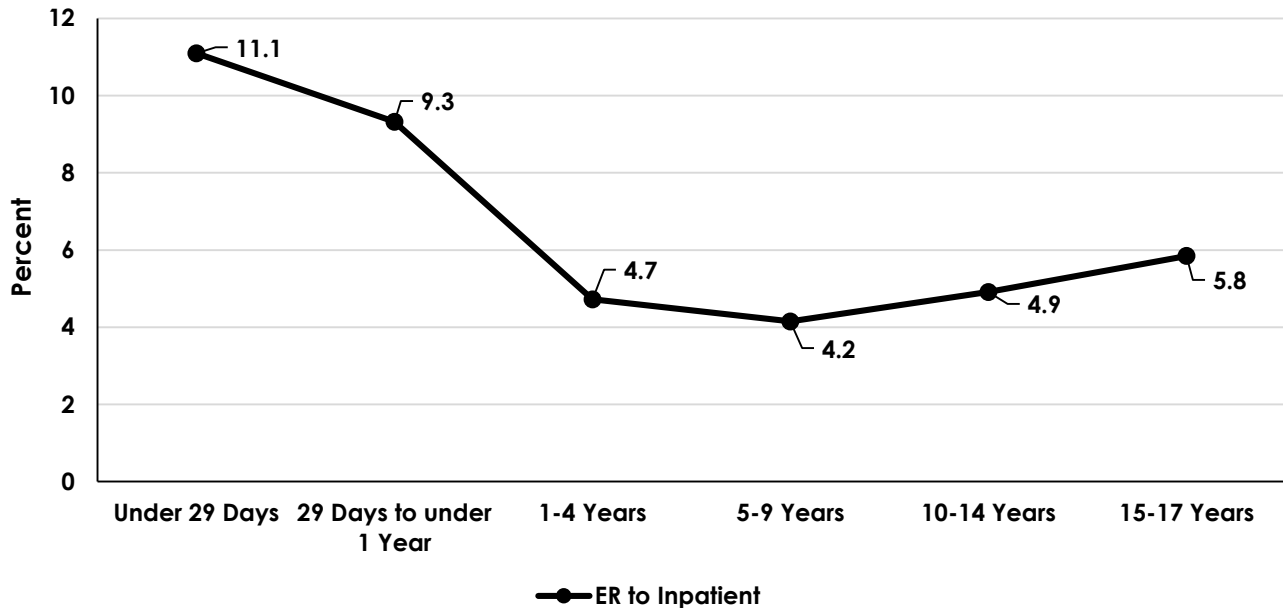
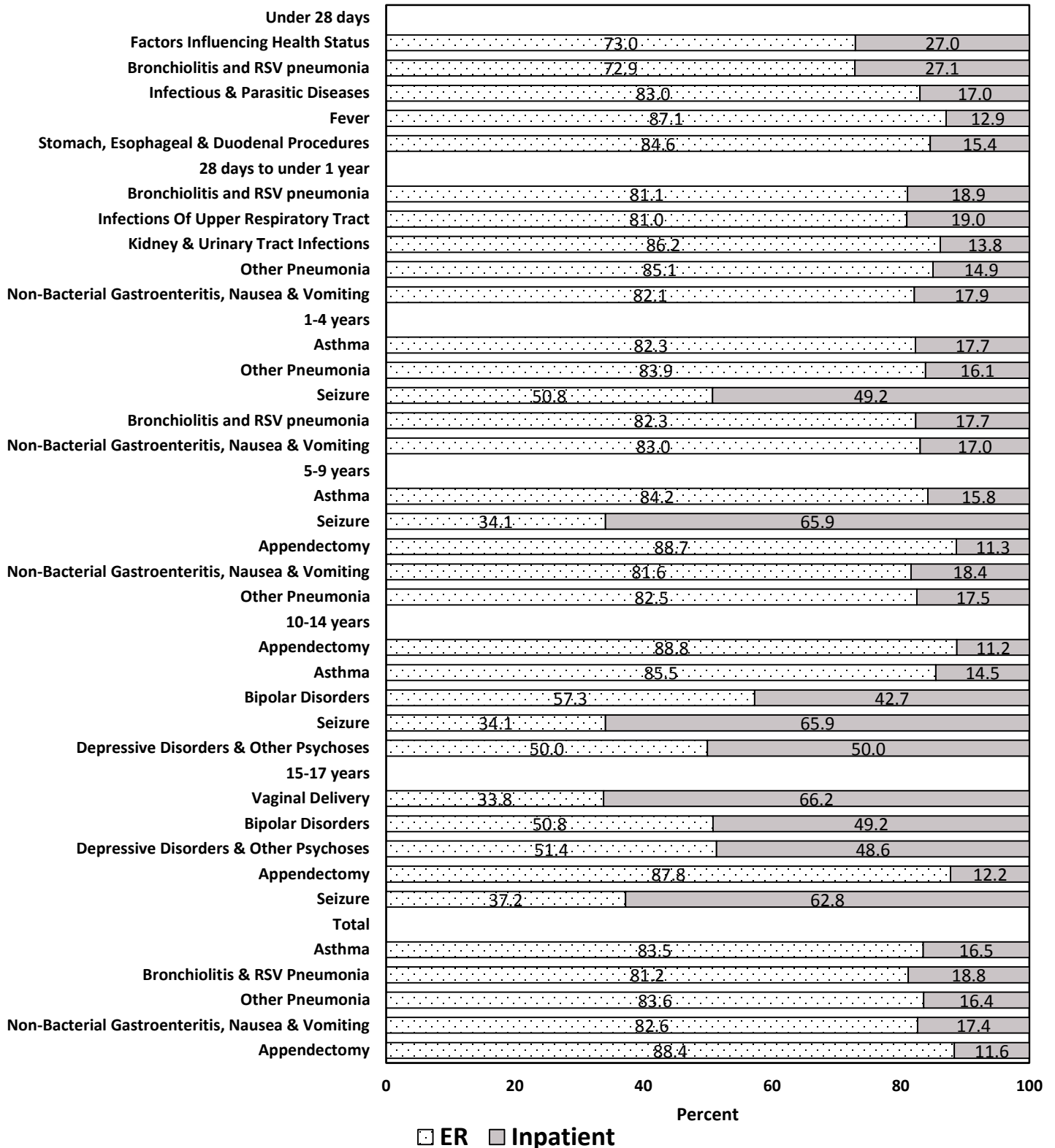


Figure 16. Pediatric Inpatient Discharges: Percent of Inpatient Discharges Admitted Through Emergency Room Compared to Direct Inpatient Admissions, by APR-DRG and Age Group, 2013



Definitions

All Patient Refined Diagnostic Related Groups (APR-DRGs)

All Patient Refined Diagnostic Related Groups (APR-DRG) were assigned to SPARCS data using grouping software created and distributed by 3M™ Corporation (3M™ Health Information Systems). A total of 314 base APR-DRGs constitute a hospital inpatient services classification system that groups patients according to diagnosis, type of treatment (procedures), and other relevant criteria (ex., age, sex, discharge status). It represents the patient's condition at the time of discharge and includes the impact of conditions that developed during the hospital stay.

AHRQ

The Agency for Healthcare Research and Quality's (AHRQ) was originally created as the Agency for Health Care Policy and Research (AHCPR) on December 19, 1989, under the Omnibus Budget Reconciliation Act of 1989, as a Public Health Service Agency in the U.S. Department of Health and Human Services (HHS). The Agency was reauthorized with a name change as the Agency for Healthcare Research and Quality on December 6, 1999, under the Healthcare Research and Quality Act of 1999. The AHRQ mission is to produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work within the U.S. Department of Health and Human Services and with other partners to make sure that the evidence is understood and used. For more information follow direct link: <http://www.ahrq.gov/>.

Child Health Plus (CHP)

Child Health Plus is a program designed for children who are residents of New York State and are under the age of 19. Children who are not eligible for Medicaid based on the family's gross income, can be covered by CHP if they do not already have health insurance. There are roughly 300,000 children enrolled in CHP in New York State.

Clinical Classification Software (CCS)

The Clinical Classifications Software for Diagnoses, and Services and Procedures is a group of databases and software tools developed as part of the Healthcare Cost and Utilization Project (HCUP), a Federal-State-Industry partnership sponsored by the Agency for Healthcare Research and Quality (AHRQ). CCS for ICD-9-CM (Diagnoses) takes the large number of diagnosis codes and collapses them into a smaller number of clinically meaningful categories. The CCS for Services and Procedures identifies smaller, more meaningful categories for Current Procedural Terminology (CPT) codes and Healthcare Common Procedure Coding System (HCPCS) codes into procedure categories. For more information and to download the software, visit <http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp> for CCS for Diagnoses and https://www.hcup-us.ahrq.gov/toolssoftware/ccs_svcsproc/ccssvcproc.jsp#info for CCS for Services and Procedures.

Pediatric Quality Indicators (PDI)

The Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators (PQIs) and Pediatric Quality Indicators (PDIs) are a set of population based measures that can be used with hospital inpatient discharge data to identify ambulatory care sensitive conditions. These are conditions where the need for hospitalization could be potentially preventable if it was treated appropriately and early with appropriate outpatient care. By obtaining quality care in the community, the condition should not become so severe it requires an inpatient hospital admission. For more information and to download the software, visit http://www.qualityindicators.ahrq.gov/Modules/pdi_resources.aspx.

Potentially Preventable Readmissions (PPR)

The Potentially Preventable Readmission (PPR) software created by 3M™ Health Information Systems, identifies hospital admissions clinically related to an initial admission within a specified time period. For this dataset, readmissions were evaluated within a 30-day time period from the discharge date of the initial hospital admission. A PPR may have resulted from a deficiency in the process of care and treatment at the initial hospitalization or lack of post discharge follow up. PPRs are not defined by unrelated events that occur post-discharge, such as admissions for trauma.

Health Service Area (HSA)

Health service area (HSA) splits the counties on New York State into eight areas.

Western NY	Finger Lakes	Central NY	NY-Penn	Northeast NY	Mid-Hudson	New York City	Long Island
Allegany	Chemung	Cayuga	Broome	Albany	Dutchess	Bronx	Nassau
Cattaraugus	Livingston	Cortland	Chenango	Clinton	Orange	Kings	Suffolk
Chautauqua	Monroe	Herkimer	Tioga	Columbia	Putnam	New York	
Erie	Ontario	Jefferson		Delaware	Rockland	Queens	
Genesee	Schuyler	Lewis		Essex	Sullivan	Richmond	
Niagara	Seneca	Madison		Franklin	Ulster		
Orleans	Steuben	Oneida		Fulton	Westchester		
Wyoming	Wayne	Onondaga		Greene			
	Yates	Oswego		Hamilton			
		St Lawrence		Montgomery			
		Tompkins		Otsego			
				Rensselaer			
				Saratoga			
				Schenectady			
				Schoharie			
				Warren			
				Washington			

Injury

The National Center for Health Statistics (NCHS) offers tools to define injuries using diagnosis codes. These injuries are then classified into broader categories for meaningful analysis. For more information and to download the software, visit http://www.cdc.gov/nchs/injury/injury_tools.htm.

Payer

Medicare- Medicare Managed Care, Medicare Non-managed Care, Medicare Other
 Private-Private Managed Care, Private Health Insurance, Blue Cross/Blue Shield
 Self-Pay-Self-Pay
 Other- Government Programs (ex. Corrections, Veterans), Managed Care Other, Charity, Workers Compensation, Other, Unknown
 Medicaid Non-CHP- Medicaid Managed Care, Medicaid Non-managed Care
 Medicaid CHP-Child Health Plus

Race/Ethnicity

Both the race and ethnicity variables on SPARCS were used to create this one combination race/ethnicity variable.
 Hispanic- a patient's whose ethnicity was Spanish/Hispanic origin, regardless of their race
 White, non-Hispanic- a patient's whose ethnicity was Unknown or not of Spanish/Hispanic origin, and race was White.
 Black, non-Hispanic- a patient's whose ethnicity was Unknown or not of Spanish/Hispanic origin, and race was Black or African American.
 Asian- a patient's whose ethnicity was Unknown or not of Spanish/Hispanic origin, and race was Asian.
 Other- a patient's whose ethnicity was Unknown or not of Spanish/Hispanic origin, and race was Native American, Alaskan Native, Native Hawaiian, Other Pacific Islander, Other race or Unknown.

SPARCS

The Statewide Planning and Research Cooperative System (SPARCS) is a comprehensive data reporting system established in 1979 as a result of cooperation between the health care industry and government. Initially created to collect information on discharges from hospitals, SPARCS currently collects patient level detail on patient characteristics, diagnoses and treatments, services, and charges for every Article 28 (acute

care) hospital discharge, ambulatory surgery, emergency room visits, and visits to hospital-based outpatient clinics in New York State. More information on SPARCS may be found at the following direct link: <http://www.health.ny.gov/statistics/sparcs/>.

Unit of analysis

The unit of analysis is either the inpatient hospital discharge or the emergency room visit, not a person or patient. This means that if a person is discharged from the hospital, and/or visits the emergency room multiple times in a year, each incident will be counted as a separate event. Therefore, a person can have more than one event in the data sets.

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