Hospital Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County and Zip Code: Beginning 2009

OVERVIEW

New York State Department of Health
Office of Quality and Patient Safety
Bureau of Health Care Analytics
December 2017

Health Data NY

NEW YORK STATE OF OPPORTUNITY. | Department of Health

General Description

The Agency for Healthcare Research and Quality (AHRQ) 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 1) the need for hospitalization is potentially preventable with appropriate outpatient care, or 2) conditions that could be less severe if treated early and appropriately.

An overview of the PDIs may be found on the AHRQ website at:
http://www.qualityindicators.ahrq.gov/modules/pdi_overview.aspx.

The software is available on the AHRQ website at:
http://www.qualityindicators.ahrq.gov/Modules/pdi_resources.aspx

The results of these data can be used to provide insight into the population health and the quality of the health care system outside of the hospital setting. Observed (crude), expected, and risk adjusted rates are presented at the county and zip code level to allow comparison with the state average, thereby identifying geographical variation. The table below provides detail on the PDIs presented in these datasets.

PDI Number	PDI Name	PDI Description
PDI_14	Asthma	Admissions with a principal diagnosis of asthma per 100,000 population, ages 2 through 17 years. Excludes cases with a diagnosis code for cystic fibrosis and anomalies of the respiratory system, obstetric admissions, and transfers from other institutions.
PDI_15	Diabetes Short-term Complications	Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 6 through 17 years. Excludes obstetric admissions and transfers from other institutions.

NEW YORK STATE OF OPPORTUNITY. | Department of Health

PDI Number	PDI Name	PDI Description
PDI_16	Gastroenteritis	Admissions for a principal diagnosis of gastroenteritis, or for a principal diagnosis of dehydration with a secondary diagnosis of gastroenteritis per 100,000 population, ages 3 months to 17 years. Excludes cases transferred from another facility, cases with gastrointestinal abnormalities or bacterial gastroenteritis, and obstetric admissions.
PDI_18	Urinary Tract Infection	Admissions with a principal diagnosis of urinary tract infection per 100,000 population, ages 3 months to 17 years. Excludes cases with kidney or urinary tract disorders, cases with a high- or intermediate-risk immunocompromised state, cases with cirrhosis and hepatic failure with a diagnosis of coma or hepatorenal syndrome, cases with transplants, transfers from other institutions, and obstetric admissions.
PDI_90	Pediatric Quality Overall Composite	Pediatric Quality Indicators (PDI) overall composite per 100,000 population, ages 6 to 17 years. Includes admissions for one of the following conditions: asthma, diabetes with short-term complications, gastroenteritis, or urinary tract infection.
PDI_91	Pediatric Quality Acute Composite	Pediatric Quality Indicators (PDI) acute composite per 100,000 population, ages 6 to 17 years. Includes admissions

PDI Number	PDI Name	PDI Description
		for one of the following conditions: gastroenteritis or urinary tract infection.
PDI92	Pediatric Quality Chronic Composite	Pediatric Quality Indicators (PDI) chronic composite per 100,000 population, ages 6 to 17 years. Includes admissions for one of the following conditions: asthma or diabetes with short-term complications.

AHRQ Quality Indicators™ Software Version

Analysis Year	Discharge Time Period	PDI Software Version
2009	January 1 – December 31, 2009	Version 4.5
2010	January 1 – December 31, 2010	Version 4.5
2011	January 1 – December 31, 2011	Version 4.5
2012	January 1 – December 31, 2012	Version 4.5
2013	January 1 – December 31, 2013	Version 4.5
2014	January 1 – December 31, 2014	Version 5.0
2015*	2014 (Oct 1-Dec 31) – 2015 (Jan 1 – Sep 30)	Version 5.0
2016	January 1 – December 31, 2016	Version 7.0

Note: For 2015 Analysis Year please refer to the Limitations of Use section.

NEW YORK STATE OF OPPORTUNITY. | Department of Health

How to Interpret the Rates

For these indicators, lower rates represent better results. The Observed Rate (per 100,000 people) is the number of PDI discharges divided by the population, multiplied by 100,000. The Expected Rate (per 100,000 people) is the number of PDI discharges adjusted by age group, gender and race/ethnicity divided by the population, multiplied by 100,000.

Hospital discharges that did not have an accurate New York State zip code were excluded from the zip code analysis dataset. Hospital discharges that did not have an accurate New York State county were excluded from the county analysis dataset. Due to this nuance, the statewide rates differ slightly between the zip code and county datasets.

Individual zip codes for which the PDI population denominator is less than 20 are removed from the zip code analysis dataset to mitigate potential instability and invalidity of observed and risk adjusted rates for these zip codes. PDI discharges in these zip codes are still included in the statewide and county level rates.

Data Methodology

SPARCS Article 28 inpatient discharge records during the Calendar Year were used for calculating rates. 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 hospital discharge, ambulatory surgery and emergency department visit in New York State.
The enabling legislation and regulations for SPARCS are located under Section 28.16 of the Public Health Law (PHL), Section 400.18 of Title 10 (Health) of the Official Compilation of Codes, Rules, and Regulations of the State of New York (NYCRR).

Article 28 hospital services, ambulatory surgery services, emergency department services or outpatient services are required to submit data to SPARCS via the Health Commerce System (HCS). The HCS provides an efficient and secure data transmission option using the powerful Internet Secure Sockets Layer (SSL) encryption technology.

More information on how SPARCS data is collected may be found at the following direct link: http://www.health.ny.gov/statistics/sparcs/data_collection.htm

More information on SPARCS may be found on the New York State Department of Health's website at the following direct link: http://www.health.ny.gov/statistics/sparcs/

Limitations of Use

Version Changes: There may be modifications of the quality indicator logic incorporated into version changes of the PDI software. Therefore, trends in rates must be interpreted with caution when completing longitudinal analysis across years that utilize different versions of the PDI software.

Transition from ICD-9-CM to ICD-10-CM Coding System: To mitigate the impact of ICD-10 compliance and PDI software version changes, as well as to facilitate trending of the PDI data, a staggered 12-month analysis period was used to represent 2015 PDI data. This included all discharge data from October 1, 2014 to September 30, 2015. All other PDI analysis years represent the calendar year.

Additional Data Sets: To provide quality indicators for a complete calendar year (CY) 2015 of hospital inpatient discharges, AHRQ version 6 software for ICD-9-CM coding system was run on the first three quarters of 2015 and AHRQ version 6 for ICD-10-CM coding system was run on the last quarter of 2015. While these quality metrics were run using the same version of the AHRQ grouper (version 6), the discharges at risk (denominators) and PDIs (nominators) were identified using both coding systems: ICD-9-CM and ICD-10-CM. Therefore, PDI rates calculated for CY 2015 discharges should be treated with caution as they might reflect the change in the coding system and not the trends in PDI rates. **These data sets covering hospital inpatient discharges from January 1, 2015 through December 31, 2015 will be posted as a separate set.**

De-Identified Data Use Limitations: The PDI datasets contain patient's zip code or county and observed, expected and risk adjusted PDI rates by measure by year. It does not contain data that is protected health information (PHI) under HIPAA. The health information is not individually identifiable.

Contact Information

Bureau of Health Care Analytics
Office of Quality and Patient Safety
New York State Department of Health
Corning Tower, Room 1911
Empire State Plaza
Albany, New York 12237
Phone: 518-473-8144
E-mail: SPARCS.submissions@health.ny.gov