SPARCS Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2009

OVERVIEW

New York State Department of Health

Office of Quality and Patient Safety

Bureau of Health Care Analytics

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General Description

3M™ Potentially Preventable Readmissions (PPRs)

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.

Within this dataset, for each hospital, the total number of at risk admissions, the total number of observed PPR chains, the observed PPR rate, the expected PPR rate, and the risk adjusted PPR rate are presented by year.

At Risk Admissions: Some types of admissions are excluded from consideration due to the nature and complexity of the required follow up care, such as most types of major metastatic malignancies, trauma, burns, many types of obstetrical admissions and newborns, as well as patients whose treatment has abruptly ended (patient left against medical advice or patient was transferred to another hospital). After removing these admissions, the remaining admissions were considered to be at risk to be followed by a PPR.

Observed PPR Chains and Rates (30 Day): A PPR chain is a sequence of PPRs that are all clinically-related to the initial admission. A PPR chain may contain an initial admission and only 1 PPR, the most common situation, or may contain multiple PPRs following the initial admission.

The observed PPR rate (per 100 hospitalizations) is the number of observed PPR chains divided by the number of at risk admissions.

Lower rates represent better results.

Expected PPR Rates (30 Day): A statewide statistical model was developed to estimate the expected number of PPR chains. For all at risk admissions, the patient's age grouping, mental health status (recorded during the initial admission), severity of illness (SOI), and All Patient Refined Diagnosis Related Group (APR DRG) assignment were used to predict the probability that the at risk admission would be followed by a PPR. The expected number of PPR chains is the sum of these probabilities across all at risk admissions in the hospital. This number represents the number of PPR chains we would expect to see in the hospital based on the characteristics of their patients during the at risk admission. The expected PPR rate (per 100 hospitalizations) is the number of expected PPR chains divided by the number of at risk admissions.

Risk Adjusted PPR Rate per 100 hospitalizations: The risk adjusted PPR rate (per 100 hospitalizations) for each facility was calculated by dividing the observed PPR rate by the expected PPR rate, multiplied by the statewide observed PPR rate. The statewide PPR rate (per 100 hospitalizations) is calculated by dividing the total number of observed PPR chains at all facilities by the total number of at risk admissions at all facilities for each discharge year separately.

Data Methodology

SPARCS Data Collection Process

SPARCS Article 28 inpatient discharge records were used to identify Potentially Preventable Readmissions.

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/

PPR Software Version

Analysis Year	PPR Software Version	Major Changes
2009	Version 30.0	N/A
2010	Version 30.0	N/A
2011	Version 30.0	N/A
2012	Version 30.0	N/A
2013	Version 30.1	None
2014	Version 31.0	None
2015	Version 32.0	ICD-10 Included

Limitations

Transition from ICD-9-CM to ICD-10-CM Coding System: The ICD-10-CM coding system was implemented starting from October 1, 2015. While the PPRs for the calendar year (CY) 2015 were calculated using one version of the 3M™ PPR grouper (32.0), grouper logic was applied to the discharges that were reported using both coding schemes (ICD-9 and ICD-10). Therefore, PPR rates calculated for CY 2015 should be treated with caution as they might reflect the change in the coding system and not the trends in PPR rates.

De-Identified Data Use Limitations

The dataset contains hospital counts of types of admissions, and observed, expected and risk adjusted PPR rates by year. It does not contain data that is protected health information (PHI) under HIPAA. The health information is not individually identifiable.

Contact Information

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