

NYS Health Connector

Volume and Estimated Cost of Hospital Services Dashboard

Overview

Office of Quality and Patient Safety
Division of Information and Statistics

Last Reviewed: January 2020

Introduction

Cardiac surgery, joint replacement, spinal surgery, bariatric surgery, birth and delivery are all major hospital events. This dashboard shows the number of times these surgeries and procedures were performed and the corresponding estimated costs at hospitals across New York State. The data show that the estimated costs for these procedures may vary between hospitals. There are many reasons for variation in estimated costs, including how complex your situation is (severity), overall number of procedures performed, hospital location, or the type of medical care provided. The amount an insurer pays a hospital or the amount that an individual consumer would pay may be different than the costs shown on this dashboard.

The goal of this dashboard is to support consumers in understanding that variation occurs, and that discussing differences in cost and volume for these procedures with a medical professional can help consumers make informed health care decisions.

Dashboard Data Sources and Methods

Statewide Planning and Research Cooperative System (SPARCS)

The New York Statewide Planning and Research Cooperative (SPARCS) is a comprehensive all payer 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.

This dashboard contains information on the volume of discharges, All Patient Refined Diagnosis Related Groups (APR-DRG) and the severity of illness level (SOI), and the facility median estimated costs. This information is also summarized on a regional level.

APR-DRGs

APR-DRGs were assigned to SPARCS inpatient data using grouping software created and distributed by 3M™ Corporation (3M™ Health Information Systems). 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. There are three major component classes of APR-DRGs: surgical, medical and ungroupable. An inpatient discharge is considered surgical if a patient had a procedure performed which would require the use of the operating room, while remaining discharges are considered medical unless there are certain errors on the record such as an invalid primary diagnosis. The services presented in these dashboards were identified and classified by select surgical and medical APR-DRGs (Table 1).

Table 1. Classification of Inpatient Services by APR-DRG

| Service | APR-DRG | Medical (M) /Surgical (P) | 2015 (APR-DRG Version 32) and 2016 (APR-DRG Version 33)* Description | 2017 (APR-DRG Version 34)* Description |
|--------------------|---------|---------------------------|--|--|
| Cardiac Procedures | 160 | P | MAJOR CARDIOTHORACIC REPAIR OF HEART ANOMALY | MAJOR CARDIOTHORACIC REPAIR OF HEART ANOMALY |
| | 161 | P | CARDIAC DEFIBRILLATOR & HEART ASSIST IMPLANT | CARDIAC DEFIBRILLATOR & HEART ASSIST IMPLANT |
| | 162 | P | CARDIAC VALVE PROCEDURES W CARDIAC CATHETERIZATION | CARDIAC VALVE PROCEDURES W AMI OR COMPLEX PDX |
| | 163 | P | CARDIAC VALVE PROCEDURES W/O CARDIAC CATHETERIZATION | CARDIAC VALVE PROCEDURES W/O AMI OR COMPLEX PDX |
| | 165 | P | CORONARY BYPASS W CARDIAC CATH OR PERCUTANEOUS CARDIAC PROCEDURE | CORONARY BYPASS W AMI OR COMPLEX PDX |
| | 166 | P | CORONARY BYPASS W/O CARDIAC CATH OR PERCUTANEOUS CARDIAC PROCEDURE | CORONARY BYPASS W/O AMI OR COMPLEX PDX |
| | 167 | P | OTHER CARDIOTHORACIC PROCEDURES | OTHER CARDIOTHORACIC & THORACIC VASCULAR PROCEDURES |
| | 169 | P | MAJOR THORACIC & ABDOMINAL VASCULAR PROCEDURES | MAJOR ABDOMINAL VASCULAR PROCEDURES |
| | 170 | P | PERMANENT CARDIAC PACEMAKER IMPLANT W AMI, HEART FAILURE OR SHOCK | PERMANENT CARDIAC PACEMAKER IMPLANT W AMI, HEART FAILURE OR SHOCK |
| | 171 | P | PERM CARDIAC PACEMAKER IMPLANT W/O AMI, HEART FAILURE OR SHOCK | PERM CARDIAC PACEMAKER IMPLANT W/O AMI, HEART FAILURE OR SHOCK |
| | 173 | P | OTHER VASCULAR PROCEDURES | Does not exist in APR DRG Version 34 |
| | 174 | P | PERCUTANEOUS CARDIOVASCULAR PROCEDURES W AMI | PERCUTANEOUS CORONARY INTERVENTION W AMI |
| | 175 | P | PERCUTANEOUS CARDIOVASCULAR PROCEDURES W/O AMI | PERCUTANEOUS CORONARY INTERVENTION W/O AMI |
| | 176 | P | CARDIAC PACEMAKER & DEFIBRILLATOR DEVICE REPLACEMENT | CARDIAC PACEMAKER & DEFIBRILLATOR DEVICE REPLACEMENT |
| | 177 | P | CARDIAC PACEMAKER & DEFIBRILLATOR REVISION EXCEPT DEVICE REPLACEMENT | CARDIAC PACEMAKER & DEFIBRILLATOR REVISION EXCEPT DEVICE REPLACEMENT |

| Service | APR-DRG | Medical (M) /Surgical (P) | 2015 (APR-DRG Version 32) and 2016 (APR-DRG Version 33)* Description | 2017 (APR-DRG Version 34)* Description |
|-----------------------------|---------|---------------------------|--|---|
| | 180 | P | OTHER CIRCULATORY SYSTEM PROCEDURES | OTHER CIRCULATORY SYSTEM PROCEDURES |
| Joint Replacement Surgeries | 301 | P | HIP JOINT REPLACEMENT | HIP JOINT REPLACEMENT |
| | 302 | P | KNEE JOINT REPLACEMENT | KNEE JOINT REPLACEMENT |
| Spinal Procedures | 303 | P | DORSAL & LUMBAR FUSION PROC FOR CURVATURE OF BACK | DORSAL & LUMBAR FUSION PROC FOR CURVATURE OF BACK |
| | 304 | P | DORSAL & LUMBAR FUSION PROC EXCEPT FOR CURVATURE OF BACK | DORSAL & LUMBAR FUSION PROC EXCEPT FOR CURVATURE OF BACK |
| | 310 | P | INTERVERTEBRAL DISC EXCISION & DECOMPRESSION | INTERVERTEBRAL DISC EXCISION & DECOMPRESSION |
| | 321 | P | CERVICAL SPINAL FUSION & OTHER BACK/NECK PROC EXC DISC EXCIS/DECOMP | CERVICAL SPINAL FUSION & OTHER BACK/NECK PROC EXC DISC EXCIS/DECOMP |
| Bariatric Surgery | 403 | P | PROCEDURES FOR OBESITY | PROCEDURES FOR OBESITY |
| Deliveries | 540 | P | CESAREAN DELIVERY | CESAREAN DELIVERY |
| | 560 | M | VAGINAL DELIVERY | VAGINAL DELIVERY |
| Newborns | 640 | M | NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM | NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM |

*A new APR-DRG version is released annually to reflect updates in diagnosis and procedure code sets and to include enhancements to the clinical classification logic. With each new version, the underlying logic to create the APR-DRGs may change. This could result in a change in the APR-DRG description, or discontinuation of the APR-DRG.

Institutional Cost Report (ICR) Data

The Institutional Cost Report (ICR) is a uniform report completed by New York State hospitals to report income, expenses, assets, liabilities, and statistics to the Department of Health (DOH). Under DOH regulations, (Part 86-1.2), Article 28 hospitals are required to file financial and statistical data with DOH annually. The ICR data is received electronically through a secured network.

Estimates of facility costs were calculated using SPARCS hospital discharges and ICR data. ICR includes facility-specific Ratios of Cost to Charges (RCCs). RCCs are calculated, certified and reported by facilities and are subject to external audit.

Estimated cost calculation example: if hospital charge is \$20,000 and the RCC is 50%, the estimated cost is \$10,000. As with charges, costs are hospital-specific and are summarized by APR-DRGs and SOI, to allow for comparison across hospitals.

Charges: are the initial, individual prices for all the items and services a hospital provides. Health care facilities determine what they will charge for items and services provided to patients and these charges are the amount the facility bills for an item or service ('charge master').

Costs: are the actual expenses incurred by a hospital in providing patient care. This can include the direct costs of patient care such as physician, nursing and other labor costs, room and board, medicines and supplies, as well as indirect costs such as overhead for administrative expenses such as infection control, medical record keeping, building maintenance and equipment.

De-identification

The New York State Department of Health adheres to all applicable federal and state rules, regulations and standards for the de-identification of protected health information. To ensure the published data is de-identified, a team of statistical analysts is engaged in an expert determination process. The expert determination method is recognized by the U.S. Department of Health & Human Services as one of two methods approved for achieving de-identification in accordance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rule. For more information on deidentification methods, please visit: https://www.hhs.gov/hipaa/for-professionals/privacy/specialtopics/de-identification/index.html#_edn1.

Limitations

When interpreting New York State data, it is important to keep in mind that variations in costs may be attributed to many factors. Some of these include overall volume, hospital teaching status, facility specific attributes, geographic region and intensity or level of care provided. Additionally, costs derived from administrative data are based upon RCCs that are submitted by a facility to the state and may not necessary reflect a final price of the services delivered.

Health care facilities determine what they will charge for items and services provided to patients and these charges are the amount the facility bills for an item or service ('charge master'). Many patients are not directly impacted by variations in billing, as insurance covers much of these costs. However, more patients in the future will be subjected to this variation in price as the movement towards high-deductible plans and higher cost sharing occurs.

Contact Information

For more information or questions about this data, please contact nysapd@health.ny.gov.