

# CDI and Quality Reporting

## How Healthcare Record Review Can Improve Outcomes



Ashley Vahey, BSN, RN, CCDS  
Deanne Wilk, BSN, RN, CCDS, CDIP, CCDS-O, CCS

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# About the Authors

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Deanne Wilk, BSN, RN, CCDS, CDIP, CCDS-O, CCS, is manager of CDI at Penn State Health in Hershey, Pennsylvania. Wilk's experience spans 35 years in the healthcare field. Her primary nursing background includes telemetry and home health nursing. From her original CDI role, she transitioned into consulting and management. Over the years, she has worked on numerous educational projects and articles, has contributed as a subject matter expert to CDI and coding coursework, and has spoken at numerous national and local conferences. Since 2015, she has been the cohost and founder of the Central Pennsylvania ACDIS chapter.





# Introduction

Those reading this volume likely well know that clinical documentation improvement (CDI) programs are an effective tool for making sure that all possible diagnoses being evaluated, monitored, or treated are included in the coded data. CDI programs began as a way to ensure information about the patient's care gets captured in the medical record and matched to that coded data, according to the rules included in the International Classification of Diseases, 10th Revision, Clinical Modification and Procedure Coding Systems (ICD-10-CM/PCS) code set.

“Documentation is an important aspect of medical care,” wrote Benjamin P. Rosenbaum, MD, in a July 2014 article titled “Improving and Measuring Inpatient Documentation of Medical Care within the MS-DRG System,” published in the journal *Perspectives on Health Information Management* ([www.ncbi.nlm.nih.gov/pmc/articles/PMC4142511/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4142511/)). “In addition to clinical communication,” Rosenbaum wrote, “documentation is coded to provide data that support quality metrics, acuity of care, billing, and accurate representation of medical conditions.”

As the CDI industry continues to grow, its mission has expanded from a coding and data focus to a more nuanced, clinical one. What began more than a decade ago as a means of translating the physician's clinical documentation into codable language now includes a range of improvement opportunities—from quality-focused measures such as present-on-admission conditions and patient safety indicators to cross-departmental support in reducing readmissions and surgical complications. Today, more CDI programs interrogate medical record information not only to ensure that the existing information can be captured to the highest degree of specificity within the code set but also to ensure that the entirety of the medical record supports all the diagnoses that are coded, billed, and reimbursed.

## Introduction

Clinical validation represents just that expansion of scope in CDI practices. It is interrogating the record to ensure that the diagnoses captured at the conclusion of a patient's episode of care can be supported by the information contained in medical record.

The impetus for clinical validation efforts is varied. It's been more than a decade since the Centers for Medicare & Medicaid Services (CMS) implemented the Medicare Severity Diagnosis-Related Group (MS-DRG) system. The system groups diagnoses by comparative resource consumption and allows for the capture of greater specificity regarding the seriousness of the patient's condition. At the time of the MS-DRG implementation, CMS wrote in the 2008 inpatient prospective payment system final rule that there was "nothing inappropriate, unethical, or otherwise wrong with hospitals taking full advantage of coding opportunities to maximize [MS-DRG assignment and] Medicare payments . . . [as long as the information is] supported by documentation in the medical record" ([www.federal-register.gov/documents/2008/08/19/E8-17914/medicare-program-changes-to-the-hospital-inpatient-prospective-payment-systems-and-fiscal-year-2009](http://www.federal-register.gov/documents/2008/08/19/E8-17914/medicare-program-changes-to-the-hospital-inpatient-prospective-payment-systems-and-fiscal-year-2009)).

The problem arises, however, when such efforts are not supported by medical record documentation or when CDI efforts push the physician to document a condition that otherwise would not exist.

The tug of war between hospitals and payers (both private and governmental) each attempting to protect their own viability led to the emergence of a host of claims denials and auditing programs. As the country's largest healthcare payer, government agencies pay close attention to trends in documentation and coding. CMS implemented the Recovery Audit Program in 2010, and by 2016 the agency claimed such efforts saved American taxpayers more than \$214 million, according to its fiscal year 2016 report to Congress ([www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Recovery-Audit-Program/Downloads/FY-2016-Medicare-FFS-Report-Congress.pdf](http://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Recovery-Audit-Program/Downloads/FY-2016-Medicare-FFS-Report-Congress.pdf)).

## Introduction

Increasingly, CDI has come to represent the first line of defense against some of these efforts, and CDI validation querying has become the way of the future if CDI professionals are to maintain compliance and ensure medical record charts contain the purest form of the diagnostic data possible. While there are many reasons for the existence of the validation query, and through the course of this book we will discuss many of them, the first and foremost is to maintain accuracy in the chart, which after all should be the result of having a clinical documentation program in the first place.

### **What Is Clinical Validation and Why Is It Important Right Now?**

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Clinical validation is a process in which diagnoses already written in the chart are reviewed by a clinical documentation specialist to ensure the corresponding clinical indicators and treatment exist alongside them, thereby “validating” the diagnoses. It is the most challenging and difficult type of review, and therefore should be performed by a CDI specialist with a strong clinical and coding background and with a seasoned history in CDI.

With the rapid expansion of CDI programs into almost every inpatient hospital setting has come the unfortunate practice of some clinicians documenting “key” diagnoses without the clinical findings and supporting evidence to justify and support them. This can happen for several reasons—they may be trying to eliminate further queries, trying to help the hospital’s bottom line and quality metrics, trying to ensure their length of stay remains in line, or they may simply not fully understand the scope of CDI efforts. This puts a lot of CDI professionals in a difficult position, one that makes many very uncomfortable.

Although the term CDI is relatively new, “HIM professionals have been retrospectively querying physicians for more complete patient information for years, and professionals working in utilization review, case management, coding, and quality assurance performed documentation improvement activities before CDI specialist positions became mainstream,” writes Mary Butler in a July 2014 *Journal of AHIMA* article titled “Reinventing CDI: Organizations Relaunching

## Introduction

and Reworking Data Integrity Efforts, and Coding Roles, with Clinical Documentation Improvement Programs” (<http://bok.ahima.org/doc?oid=107386#.W7EAcfZFyUk>). However, Butler writes, the “difference is that in the last several years, dedicated CDI specialists have focused on documenting care delivery while the patient is still in the hospital.”

With this nuanced difference in the timing of medical record reviews comes a greater opportunity to ensure the most accurate information gets captured—in real time, not in 10 days, or 20 days, or months after the patient has left the hospital. It also provides patients, physicians, and facilities with real-time opportunities for effective communication, data analysis, and overall process improvement.

Clinical validation takes concurrent CDI efforts a step further, requiring a deeper dive into the complexities and hidden compartments of the medical record for clues of care that perhaps weren’t brought forward by the attending physician. It requires CDI professionals to continue with their reviews despite having obtained necessary documentation for complication or comorbidity and major complication or comorbidity capture, beyond even expanded reviews for quality-related payment issues, such as present-on-admission and patient safety indicators.

These reviews can be daunting, but remember how daunting it was to be new to CDI in the beginning and how intimidating that felt. Remember, too, that everyone in CDI has opportunities to learn and grow. It’s part of what makes this profession special, challenging, and exciting.

Let’s get started.

# Chapter 1

## Healthcare Data and Public Reporting

Healthcare organizations are required to collect and externally report data related to safety, quality measurement, and patient satisfaction. Government initiatives such as the 2001 implementation of the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) and Procedure Coding System (ICD-10-PCS), the meaningful use electronic health record (EHR) incentive program, and accountable care organizations support the need for obtaining quality healthcare data and making that data publicly available for benchmarking and analysis.

When used effectively, healthcare data can assist in efforts to quantify healthcare reimbursement and evaluate quality measures. As with the analysis of any data, clinical documentation integrity (CDI) staff should always look at this information with a clear understanding of its origins. CDI specialists need to ensure that every documented encounter paints an accurate picture of the patient's clinical presentation and provided services.

Benchmarking data can greatly influence an organization's success. Certain pre-admission values affect reimbursement and drive patient safety reporting and risk adjustment methodologies. Specifically, private payers use healthcare data to negotiate contracts with organizations and providers. Their goal is to produce the best possible outcomes at the lowest cost. Consumers now shop for care when making choices related to healthcare delivery, and employers use healthcare data to decide what life or health insurance coverage to make available to employees.

Increasing amounts of healthcare data have become available for analysis as the industry implements more health information technology systems. As a result, the amount and types of publicly available healthcare data continue to grow as more healthcare organizations evaluate their EHR systems and the U.S. healthcare industry pushes for transparency.

## Chapter 1

Key documentation elements such as admission and discharge dates and disposition status collected during each episode of care influence CMS quality metrics and hospital reimbursement under the inpatient prospective payment system, as detailed in later chapters.

### CDI Quality Tip

CDI programs “get the noise out of the data” by ensuring accurate and precise documentation that reflects the true severity of patient conditions. Once this noise is removed, accurate data can be reported, and facilities can work to uncover clinical quality concerns within the organization.

### CDI Quality Tip

It is vital for CDI teams to adequately review records to positively affect the risk-adjusted mortality observed deaths/expected deaths ratio. CDI programs unable to review 100% of their admissions will have a lower expected result than those covering 100% of all admissions.

## Utilization Data

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Let’s move on to utilization data, which measure patient volume and resource consumption, taking specific diagnoses and conditions into account. AHRQ provides multiple databases and tools that can be broadly applied on specific healthcare topics. Policy makers can use these data, which focus on the cost and use of healthcare services throughout the U.S., to meet the nation’s healthcare needs. This information is obtained from claims data.

Some of this information comes from Medicare Provider Analysis and Review data, which consist of claims information for both acute care inpatient and skilled nursing facilities. CMS’ outpatient prospective payment system can also provide claims data pertaining to hospital outpatient encounters.

# Chapter 2

## IPPS and MS-DRGs

Every August, the Centers for Medicare & Medicaid Services (CMS) issues extensive coding and reimbursement changes in its inpatient prospective payment system (IPPS) final rule. These changes affect approximately 3,300 acute care hospitals and apply to discharges occurring on or after October 1.

The final rule includes updates to the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) and ICD-10 Procedure Coding System (ICD-10-PCS) code sets. It also includes changes to complication or comorbidity (CC) and major complication or comorbidity (MCC) designations, revisions to various Medicare Severity-Diagnosis Related Groups (MS-DRG), and changes to the relative weighting factors and geometric and arithmetic mean lengths of stay (LOS) for these diagnoses. Changes for fiscal year 2020, excerpted from Table 5 in the 2020 IPPS final rule, are shown in Figure 2.1.

The geometric mean LOS (GMLOS) is often used by case management and utilization review staff to evaluate and compare actual patient LOS. It is the average LOS for CMS patients who fall into this MS-DRG. Outliers (patients with abnormally short or long LOS) are removed from the equation when computing GMLOS, but they are included when calculating arithmetic LOS.

The working MS-DRG is based on documentation in patients' medical records and is most clinical documentation integrity (CDI) professionals' daily focus. This makes sense because Medicare, the largest healthcare payer in the country, reimburses for care using this system.



## Chapter 2

CMS relies on three essential elements to establish payment rates related to MS-DRG assignment. These are:

1. The principal diagnosis
2. Whether there is a surgical procedure or intervention considered reimbursable by CMS
3. Whether a secondary diagnosis is a CC or an MCC, or neither

**FIGURE 2.1: CMS LIST OF MS-DRGs, TABLE 5**

TABLE—LIST OF MEDICARE SEVERITY DIAGNOSIS-RELATED GROUPS (MS-DRGs), RELATIVE WEIGHTING FACTORS, AND GEOMETRIC AND ARITHMETIC MEAN LENGTH OF STAY—FY 2020 CORRECTION NOTICE								
MS-DRG	FY 2020 FINAL Post-Acute DRG	FY 2020 FINAL Special Pay DRG	MDC	TYPE	MS-DRG Title	Weights	Geometric mean LOS	Arithmetic mean LOS
001	No	No	PRE	SURG	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	27.6339	28.5	37.4
002	No	No	PRE	SURG	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W/O MCC	14.0137	16.8	20.6
003	Yes	No	PRE	SURG	ECMO OR TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W MAJOR O.R. PROCEDURE	18.9539	22.9	30.4
004	Yes	No	PRE	SURG	TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJOR O.R. PROCEDURE	11.5438	19.6	23.8
005	No	No	PRE	SURG	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	10.3127	14.5	19.5
006	No	No	PRE	SURG	LIVER TRANSPLANT W/O MCC	4.8719	7.6	8.2
007	No	No	PRE	SURG	LUNG TRANSPLANT	10.7863	17.2	20.2
008	No	No	PRE	SURG	SIMULTANEOUS PANCREAS/KIDNEY TRANSPLANT	5.6161	8.8	10.1
010	No	No	PRE	SURG	PANCREAS TRANSPLANT	3.9761	7.5	8.4
011	No	No	PRE	SURG	TRACHEOSTOMY FOR FACE, MOUTH & NECK DIAGNOSES OR LARYNGECTOMY W MCC	4.9438	11.0	13.5
012	No	No	PRE	SURG	TRACHEOSTOMY FOR FACE, MOUTH & NECK DIAGNOSES OR LARYNGECTOMY W CC	3.7740	8.5	9.7

**FIGURE 2.1: CMS LIST OF MS-DRGs, TABLE 5 (CONT.)**

**TABLE—LIST OF MEDICARE SEVERITY DIAGNOSIS-RELATED GROUPS (MS-DRGs), RELATIVE WEIGHTING FACTORS, AND GEOMETRIC AND ARITHMETIC MEAN LENGTH OF STAY—FY 2020 CORRECTION NOTICE**

MS-DRG	FY 2020 FINAL Post-Acute DRG	FY 2020 FINAL Special Pay DRG	MDC	TYPE	MS-DRG Title	Weights	Geometric mean LOS	Arithmetic mean LOS
013	No	No	PRE	SURG	TRACHEOSTOMY FOR FACE, MOUTH & NECK DIAGNOSES OR LARYNGECTOMY W/O CC/MCC	2.4253	6.0	6.7
014	No	No	PRE	SURG	ALLOGENEIC BONE MARROW TRANSPLANT	12.7548	25.0	28.5
016	No	No	PRE	SURG	AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC OR T-CELL IMMUNOTHERAPY	6.8852	16.8	18.1
017	No	No	PRE	SURG	AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC	4.4474	7.8	10.5
020	No	No	01	SURG	INTRACRANIAL VASCULAR PROCEDURES W PDX HEMORRHAGE W MCC	10.8210	13.5	16.9

Source: CMS. (2020). *Final rule and correction notice, Table 5*. Retrieved from [https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/InpatientPPS/FY2020-IPPS-Final-Rule-Tables](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/InpatientPPS/FY2020-IPPS-Final-Rule-Home-Page-Items/FY2020-IPPS-Final-Rule-Tables)

Figure 2.1 lists MS-DRG 001 first, as it is the highest-weighted MS-DRG assigned to patients who receive a heart transplant or implant of a heart assist system with an MCC (the figure is not an all-inclusive list). The higher the relative weight, the higher the reimbursement. The final rule also includes tables that list CCs and MCCs.

Refer to CMS for additional information on the attributes that define each MS-DRG: [https://www.cms.gov/licd10m/version37-fullcode-cms/fullcode\\_cms/Defining\\_the\\_Medicare\\_Severity\\_Diagnosis\\_Related\\_Groups\\_\(MS-DRGs\).pdf](https://www.cms.gov/licd10m/version37-fullcode-cms/fullcode_cms/Defining_the_Medicare_Severity_Diagnosis_Related_Groups_(MS-DRGs).pdf)

**i CDI Quality Tip**

CDI professionals must review annual updates to the IPPS final rule, including changes to MS-DRGs as well as Inpatient Only Procedures and MCC/CCs. Professionals who don't familiarize themselves with these updates risk making decisions that negatively impact revenue and quality reporting.

# Chapter 3

## Diagnosis and Procedure Coding and Data Use

The World Health Organization (WHO), which maintains and releases the International Classification of Diseases (ICD) used to track diseases across the globe, began using its tenth revision of the code set in 1994 and is preparing to release its eleventh revision. The WHO designed the ICD system to classify morbidity and mortality data, index diseases, and store this data for future analysis.

The U.S., however, began using ICD-10 in October 2015 and, while based on the WHO's version, amended the ICD-10 codes with its own Clinical Modification (ICD-10-CM) and Procedure Coding System (ICD-10-PCS) used for most health-care reimbursement processes in the country. ICD-10-PCS is not part of the WHO's ICD compilation and is only used in America.

This chapter explores the rules governing code assignment, known as the *ICD-10-CM/PCS Official Guidelines for Coding and Reporting*.

### Understanding Code Sets

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Code sets are designed to classify diseases, impairments, and health-related problems and their manifestations. They are used to describe causes of injuries, diseases, impairments, and other health-related problems. Code sets may also be used to classify actions taken to prevent, diagnose, treat, or manage diseases, injuries, and impairments such as social determinants.

ICD-10-CM codes are assigned for diagnoses in all settings of care, both inpatient and outpatient. Appropriate codes are assigned to identify the reason for the encounter, including diagnoses, symptoms, conditions, problems, and complaints.

The applicable procedural code set varies by setting. If the patient is admitted to an inpatient setting, procedural codes are assigned using the ICD-10-PCS code set.

## Diagnosis and Procedure Coding and Data Use

The *Official Guidelines for Coding and Reporting* clarify the coding and sequencing instructions found within the code manual. The Health Insurance Portability and Accountability Act of 1996 requires organizations to adhere to these guidelines.

### UHDDS

The Uniform Hospital Discharge Data Set (UHDDS) defines the standardized elements created for the inpatient hospital setting. The National Committee on Vital and Health Statistics works to obtain consensus on a small set of data elements often considered the core of data collection. UHDDS provides a set of core data elements with agreed-upon standardized definitions used to collect and produce data for the purpose of achieving comparability.

The UHDDS is comprised of the following data elements, available on its website:

**FIGURE 3.1: UHDDS DATA ELEMENTS**

1. Personal/Unique Identifier 2/	16. Date of Encounter (outpatient and physician services)	28. Patient's Stated Reason for Visit or Chief Complaint (outpatient) 2/
2. Date of Birth	17. Facility Identification 1/	29. Diagnosis Chiefly Responsible for Services Provided (outpatient)
3. Gender	18. Type of Facility/Place of Encounter 1/	30. Other Diagnoses (outpatient)
4. Race and Ethnicity	19. Health Care Practitioner Identification (outpatient) 1/	31. External Cause of Injury
5. Residence	20. Location or Address of Encounter (outpatient)	32. Birth Weight of Newborn
6. Marital Status	21. Attending Physician Identification (inpatient) 1/	33. Principal Procedure (inpatient)
7. Living/Residential Arrangement 1/	22. Operating Clinician Identification (inpatient) 1/	34. Other Procedures (inpatient)
8. Self-Reported Health Status 2/	23. Health Care Practitioner Specialty 1/	35. Dates of Procedures (inpatient)
9. Functional Status 2/	24. Principal Diagnosis (inpatient)	36. Procedures and Services (outpatient)
10. Years of Schooling	25. Primary Diagnosis (inpatient)	37. Medications Prescribed
11. Patient's Relationship to Subscriber/Person Eligible for Entitlement	26. Other Diagnoses (inpatient)	38. Disposition of Patient (inpatient) 1/
12. Current or Most Recent Occupation and Industry 2/	27. Qualifier for Other Diagnoses (inpatient)	39. Disposition (outpatient)
13. Type of Encounter 2/		40. Patient's Expected Sources of Payment 1/
14. Admission Date (inpatient)		41. Injury Related to Employment
15. Discharge Date (inpatient)		42. Total Billed Charges 1/

*Footnotes: 1/ element for which substantial agreement has been reached but for which some amount of additional work is needed; 2/ element which has been recognized as significant but for which considerable work remains to be undertaken. A lack of footnote indicates that the element is ready for implementation.*

*Source: National Center for Health Statistics. (2018). The Core Health Data Elements.*

*Retrieved from <https://ncvhs.hhs.gov/wp-content/uploads/2018/03/ncvhs-report-on-core-health-data-elements>*

# Chapter 4

## National Clinical Quality Measures

The U.S. Department of Health and Human Services (HHS) published the National Quality Strategy (NQS) in 2011 to provide a framework for coordinating quality measure development, implementation, and maintenance efforts.

### NQS

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The NQS' goal is to pursue what is known as the Triple Aim (Agency for Healthcare Research and Quality [AHRQ], 2020):

- **Better care:** Improve the overall quality of healthcare by making it patient-centered, reliable, accessible, and safe
- **Healthy people/healthy communities:** Improve the health of the U.S. population by supporting proven interventions to address behavioral, social, and environmental determinants of health
- **Affordable care:** Reduce the cost of quality healthcare for individuals, families, employers, and the government

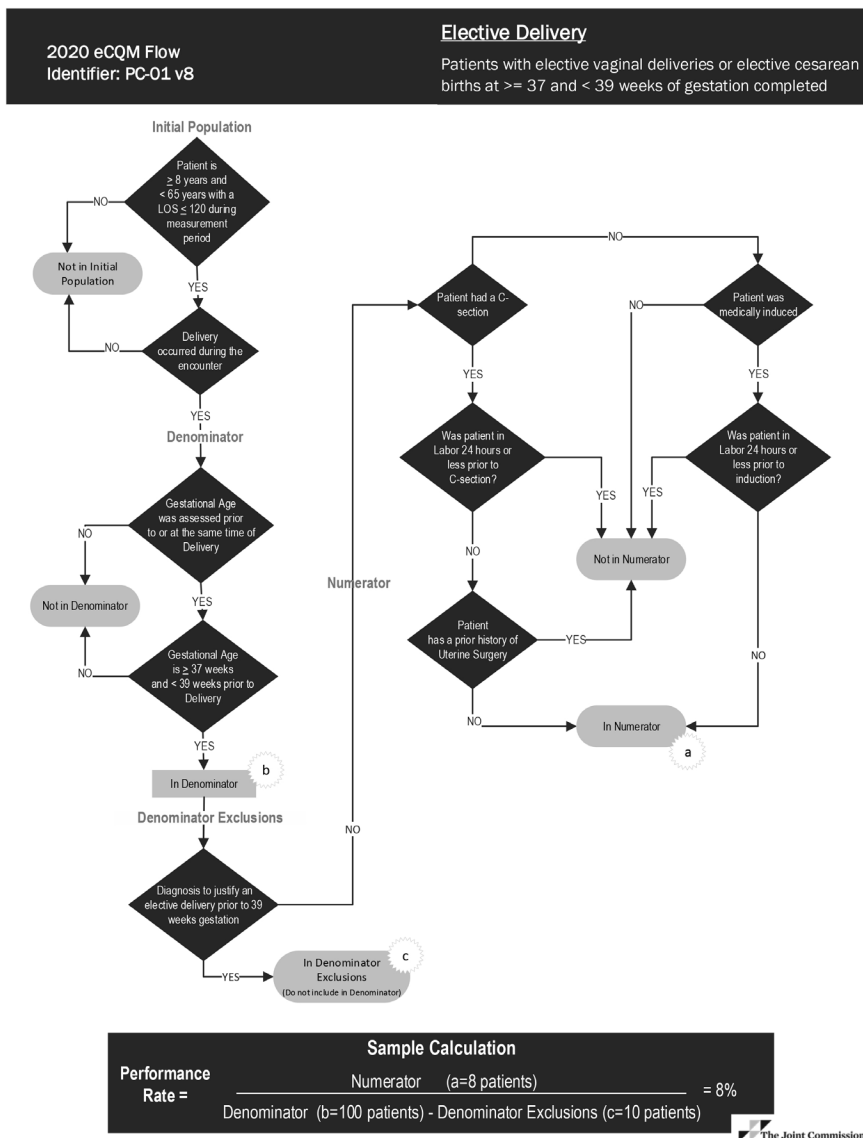
To advance these aims, the NQS focuses on six priorities:

- Ensuring that families are engaged in patient care
- Making care safer by reducing harm due to inadequate care delivery
- Making quality care more affordable for individuals, families, employers, and governments by developing new healthcare delivery models
- Promoting effective communication and coordination of care
- Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease
- Working with communities to promote the use of healthcare best practices

# National Clinical Quality Measures

The following flow charts outline two of The Joint Commission measures:

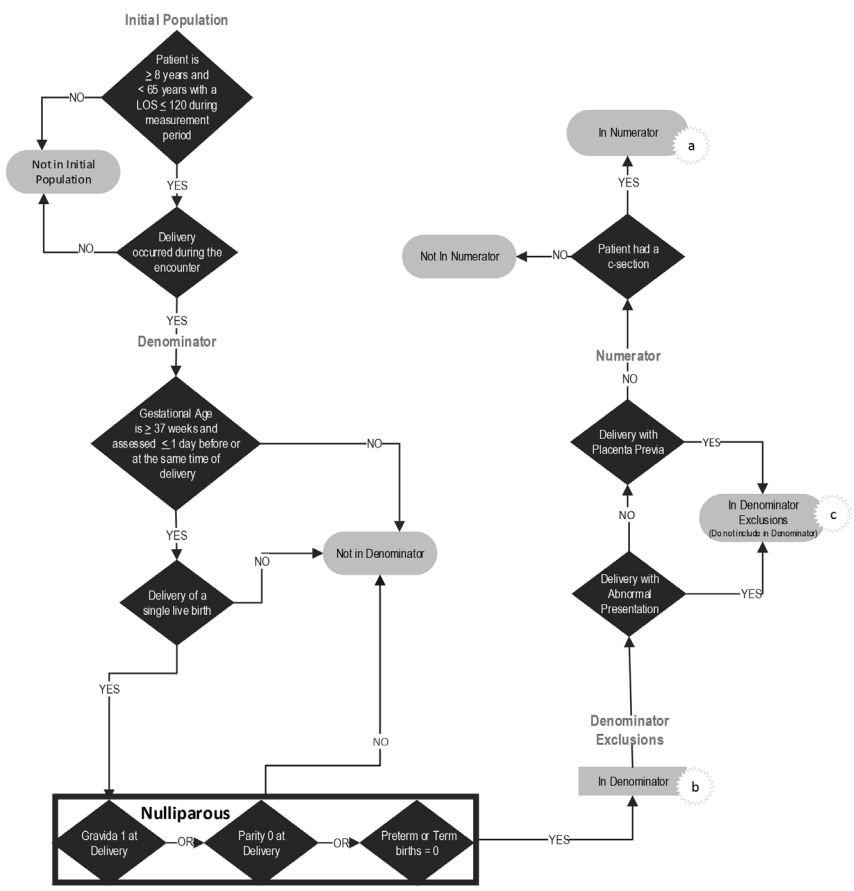
**FIGURE 4.9: PC-01, ELECTIVE DELIVERY**



Source: The Joint Commission. (2020). *Electronic Clinical Quality Measures*. Retrieved from <https://www.jointcommission.org/measurement/specification-manuals/electronic-clinical-quality-measures/>.

**FIGURE 4.10: PC-02, CESAREAN BIRTH**

**Cesarean Birth**  
 Patients with elective cesarean births at >= 37 weeks of gestation completed



**Sample Calculation**

Performance Rate =  $\frac{\text{Numerator (a=8 patients)}}{\text{Denominator (b=100 patients) - Denominator Exclusions (c=10 patients)}} = 8\%$



Source: The Joint Commission. (2020). *Electronic Clinical Quality Measures*. Retrieved from <https://www.jointcommission.org/measurement/specification-manuals/electronic-clinical-quality-measures/>.

# Chapter 5

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## Risk Adjustment

Patients with chronic comorbid conditions are at heightened risk for readmission, lengthy hospital stays, and mortality. Several quality measures are risk-adjusted, meaning they take into consideration variation in patient outcomes that stem from differences in patient characteristics across healthcare organizations. For example, a patient with heart failure, hypertension, chronic obstructive pulmonary disease, and end-stage renal disease would likely be at higher risk for readmission than a patient who has chronic hypertensive heart failure with no renal involvement.

Most risk adjustment models use diagnosis codes to identify patients who are considered “risky” by healthcare insurance companies; International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes assist in the identification of patients with a higher medical need than others. The process of risk adjustment is used to predict costs linked to care delivery and quality reporting. The goal of risk adjustment models is to allow healthcare professionals and insurance companies to evaluate and compare patients on an equal scale.

Factors that may contribute to a higher medical need include age, gender, socioeconomic status, disability status, insurance coverage, and patient-specific conditions, among others. Risk adjustment for quality measures often uses the same methodology, with the goal of decreasing the effect of measures for high-risk patients who are likely to develop complications and comorbidities.



**FIGURE 5.3: 2020 APCC MODEL RELATIVE FACTORS**

Variable	Description Label	Community, NonDual, Aged	Community, NonDual, Disabled	Community, FBDual, Aged	Community, FBDual, Disabled	Community, PBDual, Aged	Community, PBDual, Disabled	Institutional
<b>Female</b>								
0-34 Yrs.		-	0.241	-	0.349	-	0.383	0.902
35-44 Yrs.		-	0.315	-	0.349	-	0.414	1.105
45-54 Yrs.		-	0.348	-	0.374	-	0.418	1.043
55-59 Yrs.		-	0.379	-	0.434	-	0.414	1.065
60-64 Yrs.		-	0.428	-	0.490	-	0.412	1.067
65-69 Yrs.		0.323	-	0.441	-	0.359	-	1.245
70-74 Yrs.		0.386	-	0.519	-	0.406	-	1.150
75-79 Yrs.		0.451	-	0.593	-	0.476	-	1.014
80-84 Yrs.		0.528	-	0.716	-	0.550	-	0.882
85-89 Yrs.		0.641	-	0.865	-	0.653	-	0.798
90-94 Yrs.		0.783	-	0.987	-	0.783	-	0.668
95 Yrs. or Over		0.787	-	1.041	-	0.873	-	0.501
<b>Male</b>								
0-34 Yrs.		-	0.156	-	0.240	-	0.389	1.101
35-44 Yrs.		-	0.199	-	0.235	-	0.282	1.002
45-54 Yrs.		-	0.241	-	0.307	-	0.313	0.965
55-59 Yrs.		-	0.287	-	0.402	-	0.340	1.017
60-64 Yrs.		-	0.330	-	0.526	-	0.373	1.061
65-69 Yrs.		0.308	-	0.494	-	0.370	-	1.288
70-74 Yrs.		0.394	-	0.600	-	0.427	-	1.329
75-79 Yrs.		0.473	-	0.710	-	0.500	-	1.317
80-84 Yrs.		0.556	-	0.803	-	0.544	-	1.207
85-89 Yrs.		0.686	-	1.000	-	0.659	-	1.122
90-94 Yrs.		0.841	-	1.142	-	0.834	-	0.989
95 Yrs. or Over		0.986	-	1.267	-	1.047	-	0.821

Source: CMS. (2020). *Table VI-1. 2020 Alternative Payment Condition Count Model Relative Factors for Continuing Enrollees*. Retrieved from <https://www.cms.gov/Medicare/Health-Plans/MedicareAdvsSpecRateStats/Downloads/Announcement2020.pdf>, p. 74.

# Chapter 6

## Hospital-Acquired Conditions

There are two Medicare initiatives that focus on hospital-acquired conditions (HAC): the HAC and Present on Admission (POA) Indicator provision and the HAC Reduction Program (HACRP). Each initiative focuses on different aspects of quality and relies on distinct data collection methods.

The HAC and POA Indicator provision was signed into law in 2006 as part of the Deficit Reduction Act. It mandates the secretary of the Department of Health and Human Services to identify conditions that:

1. Are considered high-cost and/or high-volume
2. Result in a higher-weighted Medicare Severity Diagnosis-Related Group (MS-DRG) and therefore increase payment
3. Are preventable when using evidence-based practice

The provision requires a quality adjustment in MS-DRG payments for certain HACs. Under this provision, effective October 1, 2007, Medicare providers are required to submit POA indicators for all diagnosis codes listed on inpatient acute care hospital claims.

The HAC program saves Medicare approximately \$30 million annually by withholding additional payment for the treatment of certain conditions that are reasonably preventable or acquired after the beneficiary is admitted to the hospital for the treatment of a different condition.

As the term implies, POA indicators show whether or not a condition exists at the time a patient is admitted or develops over the course of their hospitalization. A HAC is a condition that is not POA and recognized as such by the Centers for Medicare & Medicaid Services (CMS). When a diagnosis is identified as POA, it provides a complication or comorbidity (CC) or a major complication or comorbidity (MCC) as a secondary diagnosis and therefore could result in the

### HACs

---

The following conditions were identified as HACs by CMS for fiscal years (FY) 2014–2020:

- Foreign object retained after surgery
- Air embolism
- Blood incompatibility
- Pressure ulcer, stage III or IV
- Falls and trauma
  - Fractures
  - Dislocations
  - Intracranial injury
  - Crush injury
  - Burn
  - Other injury
- Manifestations of poor glycemic control
  - Diabetic ketoacidosis
  - Nonketotic hyperosmolar coma
  - Hypoglycemic coma
  - Secondary diabetes with ketoacidosis
  - Secondary diabetes with hyperosmolarity
- Catheter-associated urinary tract infection (UTI)
- Vascular catheter-associated infection
- Surgical site infection, mediastinitis, following coronary artery bypass graft (CABG)
- Surgical site infection following bariatric surgery for obesity
  - Laparoscopic gastric bypass
  - Gastroenterostomy

### CDI Quality Tip

CDI professionals may use queries to obtain clear documentation of any potential complications. Below is an example of a complication query.

#### **FIGURE 6.2: DOCUMENTATION CLARIFICATION REQUEST**

Dear Dr.

Patient Name:

Encounter Number:

Some clarification from you is required to have a complete and accurate medical record. Please respond to this query immediately and document clarification within the patient's medical record. Please also know that this documentation clarification will become part of this patient's legal medical record.

The clinical findings below are documented within the patient's medical record:

[Insert clinical findings]

Based on your clinical judgment, please clarify which, if any, of the following conditions are responsible for these findings.

Complication of procedure

A routinely expected outcome or occurrence and not clinically significant

Other (please specify)

Clinically unable to determine

Thank you,

Add name and title here

Phone

Email

**FIGURE 6.3: CAUTI CRITERIA**

Criterion	Urinary Tract Infection (UTI)
SUTI 1a Catheter-Associated Urinary Tract Infection (CAUTI) in any age patient	<p>Symptomatic UTI (SUTI) Must meet at least <b>one</b> of the following criteria:</p> <p>Patient must meet 1, 2, and 3 below:</p> <ol style="list-style-type: none"> <li>1. Patient had an indwelling urinary catheter that had been in place for more than 2 consecutive days in an inpatient location on the date of event AND was either: <ul style="list-style-type: none"> <li>• Present for any portion of the calendar day on the date of event, OR</li> <li>• Removed the day before the date of event<sup>†</sup></li> </ul> </li> <li>2. Patient has at least one of the following signs or symptoms: <ul style="list-style-type: none"> <li>• fever (&gt;38.0°C): Reminder: To use fever in a patient &gt; 65 years of age, the IUC needs to be in place for more than 2 consecutive days in an inpatient location on date of event and is either still in place OR was removed the day before the DOE.</li> <li>• suprapubic tenderness*</li> <li>• costovertebral angle pain or tenderness*</li> <li>• urinary urgency <sup>^</sup></li> <li>• urinary frequency <sup>^</sup></li> <li>• dysuria <sup>^</sup></li> </ul> </li> <li>3. Patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of ≥105 CFU/ml (see comments). All elements of the SUTI criterion must occur during the IWP (see IWP definition Chapter 2, Identifying HAIs in NHSN).</li> </ol> <p><sup>†</sup> When entering event into NHSN, choose "INPLACE" for Risk Factor for IUC  <sup>‡</sup> When entering event into NHSN, choose "REMOVE" for Risk Factor for IUC  <sup>*</sup>With no other recognized cause (see comments)  <sup>^</sup> These symptoms cannot be used when catheter is in place. An IUC in place could cause patient complaints of "frequency," "urgency," or "dysuria".</p> <p>Note:</p> <ul style="list-style-type: none"> <li>• Fever is a non-specific symptom of infection and cannot be excluded from UTI determination because it is clinically deemed due to another recognized cause.</li> </ul>

Source: CDC. (2020). *Urinary Tract Infection Events*. Retrieved from <https://www.cdc.gov/nhsn/pdfs/pscmannual/7psccaucitcurrent.pdf>. p. 5-7.

Based on this criterion, the patient discussed previously would meet criteria for a CAUTI. This would most likely be reported to NHSN by your infection prevention department.

Assume the same patient's urine culture results as mixed flora. This patient would not meet criteria because the urine culture is not >100,000 CFU/ml. This would not be a reportable CAUTI; however, the physician may decide the patient should

# Chapter 7

## Hospital Value-Based Purchasing Program

The Hospital Value-Based Purchasing (HVBP) Program is a Centers for Medicare & Medicaid Services (CMS) initiative that rewards acute care hospitals with incentive payments for evidence of quality care administration. The program was developed as part of Section 1886(o) of the Social Security Act and enables CMS to pay for performance instead of using the former fee-for-service model.

The HVBP Program is aimed at promoting quality care and enhancing patient experience and satisfaction. CMS hopes to achieve these goals by:

- Changing hospital processes to improve patient experience
- Eliminating or reducing adverse events
- Increasing transparency
- Recognizing hospitals that achieve high-quality/low-cost care
- Using evidence-based care standards and protocols

CMS measures a hospital's performance based on two factors:

- **Achievement:** How well a given hospital performs on individual measures compared to other hospitals during the performance period
- **Improvement:** How much a given hospital improves on individual measures compared to their own baseline performance

To measure improvement, baseline data are collected and then compared to performance data. To measure achievement, an organization's data are compared to other organizations. To determine how many points a given hospital should be awarded for the Achievement and Improvement scores, CMS uses an achievement threshold and benchmark.

## Quality Domains

For FY 2020, performance in the HVBP is based on the four quality domains outlined in Figure 7.1.

**FIGURE 7.1: HVBP QUALITY DOMAINS AND WEIGHTS**

Domain	Measure ID	Measure Name
Clinical Outcomes (25%)	MORT-30-AMI	Acute Myocardial Infarction 30-day mortality rate
	MORT-30-HF	Heart Failure 30-day mortality rate
	MORT-30-PN	Pneumonia 30-day mortality rate
	COMP-HIP-KNEE	Elective THA/TKA complication rate
Person and Community Engagement (25%)	HCAHPS	Overall rating of hospital
		Communication with doctors
		Communication with nurses
		Responsiveness of hospital staff
		Communication about medication
		Cleanliness and quietness of hospital environment
		Care transition
Safety (25%)	CLABSI	Central line-associated blood stream infection
	CAUTI	Catheter-associated UTI
	CDI	Clostridium difficile infection
	MRSA	MRSA bacteremia
	SSI	Surgical site infection: Colon surgery & abdominal hysterectomy
	PC-01	Elective delivery prior to 39 completed weeks gestation
Efficiency and Cost Reduction (25%)	MSPB	Medicare spending per beneficiary

Source: CMS. (2020). Adapted from “Understanding the Fiscal Year 2020 Hospital Value-Based Purchasing Program.” Retrieved from <https://www.qualitynet.org/inpatient/hvbp/resources#tab3>.

If three of four domains receive scores, an organization may still receive a TPS. When an organization has scores in three domains, the TPS gets reweighted proportionately. It will be scored out of 100 points, and the weights of the scored domains will remain equal.

# Chapter 8

## Hospital Readmission Reduction Program

Not all readmissions are preventable; however, hospitals may be able to reduce their average readmission rates by measuring patient outcomes and factors that contribute to rehospitalizations and using these data to effectively coordinate transitions of care after discharge. Potentially preventable readmissions include those resulting from unclear discharge instructions, poor communication with post-acute care providers, or inadequate follow-up.

To reduce readmissions and improve the quality of care provided by hospital systems, the Centers for Medicare & Medicaid Services (CMS) introduced the Hospital Readmission Reduction Program (HRRP) under its Hospital Value-Based Purchasing Program.

CMS defines the HRRP as:

*A Medicare value-based purchasing program that reduces payments to hospitals with excess readmissions. The program supports the CMS' national goal of improving healthcare for Americans by linking payment to the quality of hospital care. CMS includes readmission measures for specific conditions and procedures that significantly affect the lives of large numbers of Medicare patients. HRRP encourages hospitals to improve communication and care coordination efforts to better engage patients and caregivers, with respect to post-discharge planning (CMS, 2020, About).*

CMS defines a *readmission* as a patient's return to the hospital for additional care within 30 days of his or her initial stay. The readmission could be to the same hospital or another acute care hospital.



# Chapter 9

## AHRQ Quality Indicators

The Agency for Healthcare Research and Quality (AHRQ) is a federal department that is tasked with improving quality and safety within the healthcare system. To achieve this, AHRQ provides healthcare systems with data, tools, and resources to help systems achieve their quality goals. To reduce patient harm, AHRQ has developed Quality Indicators. Patient Safety Indicators (PSI) are the most well-known Quality Indicators, but there are many other measures that may be relevant to your organization.

There are two types of Quality Indicators measured by AHRQ:

- **Area-level indicators:** These capture potentially preventable complications for a population during a hospitalization. This indicator is used to recognize admissions that could have been prevented if the patient lived in an area with better access to preventive or outpatient care. However, due to reduction in use by facilities, this measure will be removed from PSIs beginning with Version 7. Please see [https://www.qualityindicators.ahrq.gov/modules/psi\\_resources.aspx](https://www.qualityindicators.ahrq.gov/modules/psi_resources.aspx) for additional retirement announcements and rationales. There are still area-level measures for Pediatric Quality Indicators (PDI).
- **Hospital-level indicators:** These capture potentially preventable complications, adverse events, deaths following a procedure, and conditions due to inadequate care. Within this category are three inpatient quality measurements:
  - Inpatient Quality Indicators (IQI)
  - PDI/Neonatal Quality Indicators (NQI)
  - PSI

# Chapter 10

## Implementation of the CDI Process for Quality Review

We have reviewed various national quality measures that clinical documentation integrity (CDI) departments can incorporate into their daily workflow. These measures affect public reporting for an organization and, more importantly, impact patient care. Often, CDI departments are working with minimal resources and staffing and find it difficult to add to their already overwhelming workload. However, implementing a process for quality review may be a path forward to increase necessary resources, drive provider engagement, and further administrative support. We have set forth a plan of action for integrating these initiatives into your workflow process.

The quality measures you want to initiate must align with your organizational goals. You can begin with assessing Patient Safety Indicators (PSI), mortality rates, readmission rates, or lengths of stay (LOS). What you choose should be important to your organization to obtain support for the review and necessary resources.

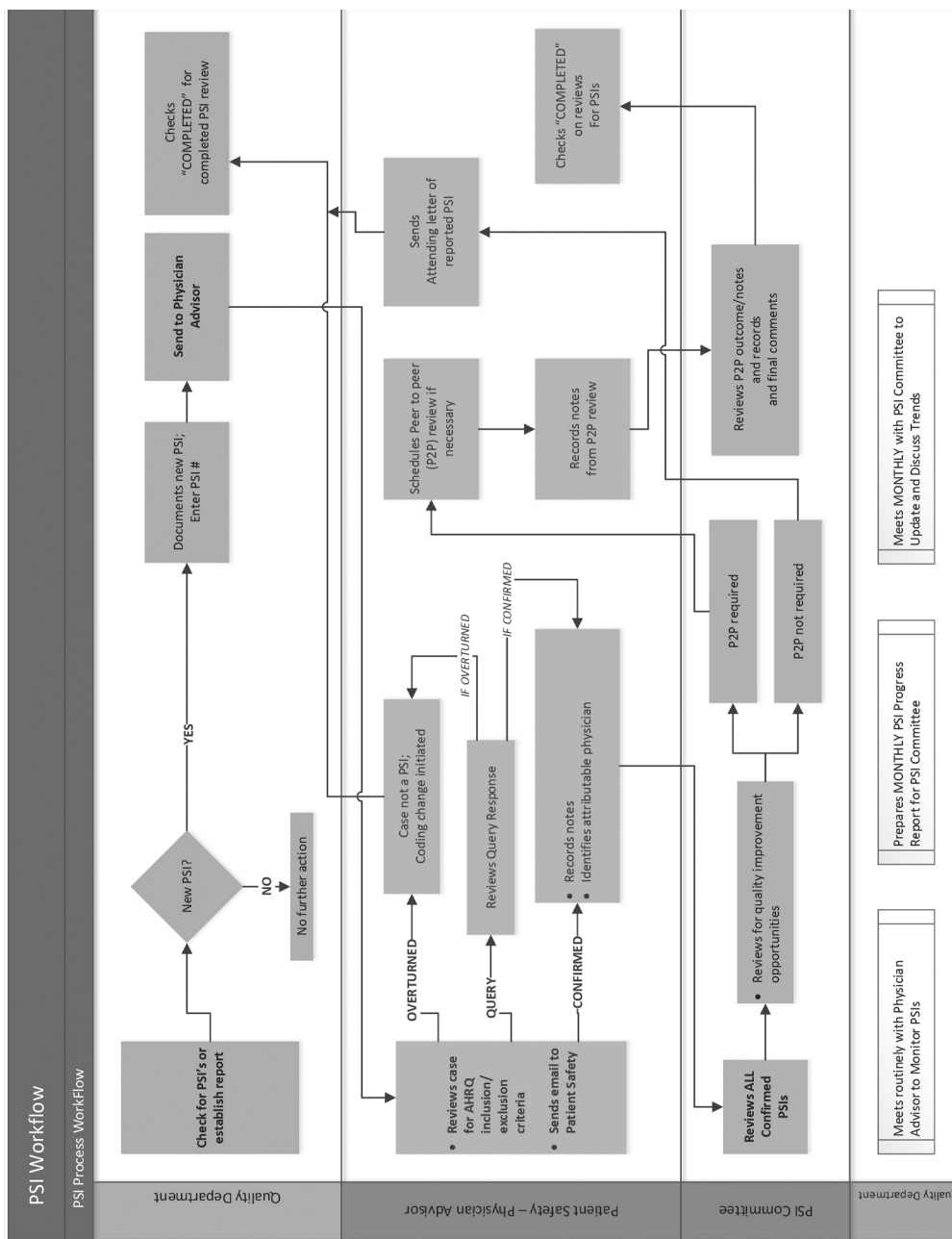
Begin with an A3 or charter for all proposed work. This presents a clear picture of what you want to do and why it should matter to your organization.

## Implementation of the CDI Process for Quality Review

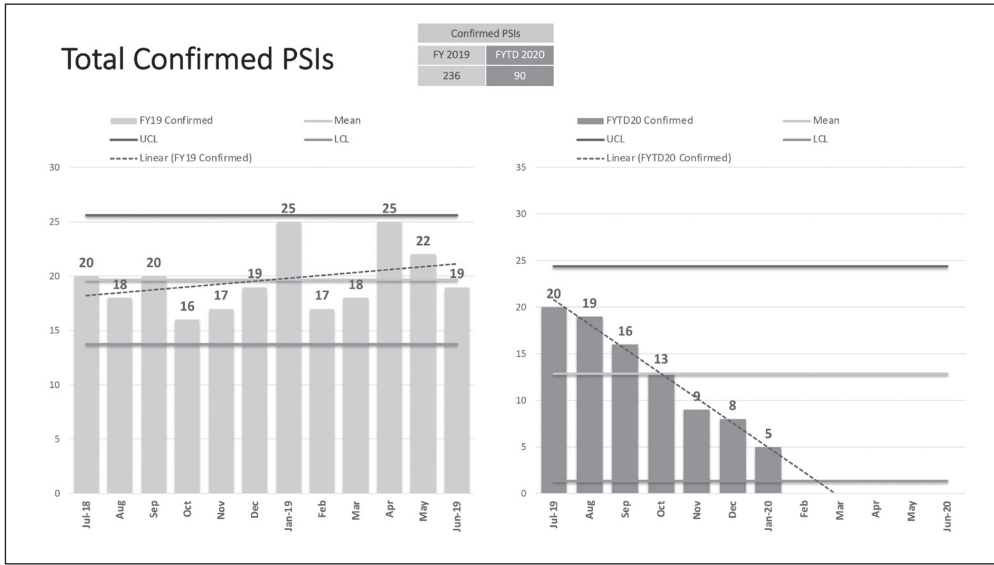
**FIGURE 10.2: PROJECT CHARTER EXAMPLE**

Project Title:		Quality Improvement Advisor:	
Process Impacted:			
Executive Sponsor:		Process Owner (Nurse) Process Owner (MD)	
Champion Nurse:		Champion Physician:	
Start Date:		Target Completion Date:	
PROJECT DESCRIPTION			
1. Project Description 2. Problem Statement 3. Business Case	Project Description: Problem Statement: Business Case:		
4. Project Scope	In Scope:    Out of Scope:		
5. Project Goals SMART: Simple Measurable Accurate Realistic Timely	Include a description of what is to be accomplished (reduced, increase, eliminate), a measurable target for desired results, and a projected completion date to reach the SMART goal.	Baseline	Target
		Stretch	
	1. Outcome Measure		
	2. Process Measure		
6. Key Stakeholders			
7. Assumptions and Risks			
8. Team Members			
9. Support Required			
SCHEDULE	DATES	KEY MILESTONES/TIMELINE	
Plan			
Do (Initiate Plan)			
Check (Analyze)			
Act (Sustain the Gain)			
Close			
SIGNATURES			
Executive Sponsor			
Champion			
Champion			
Process Owner			
Quality Improvement Advisor			

**FIGURE 10.3: PSI PROCESS FLOW**



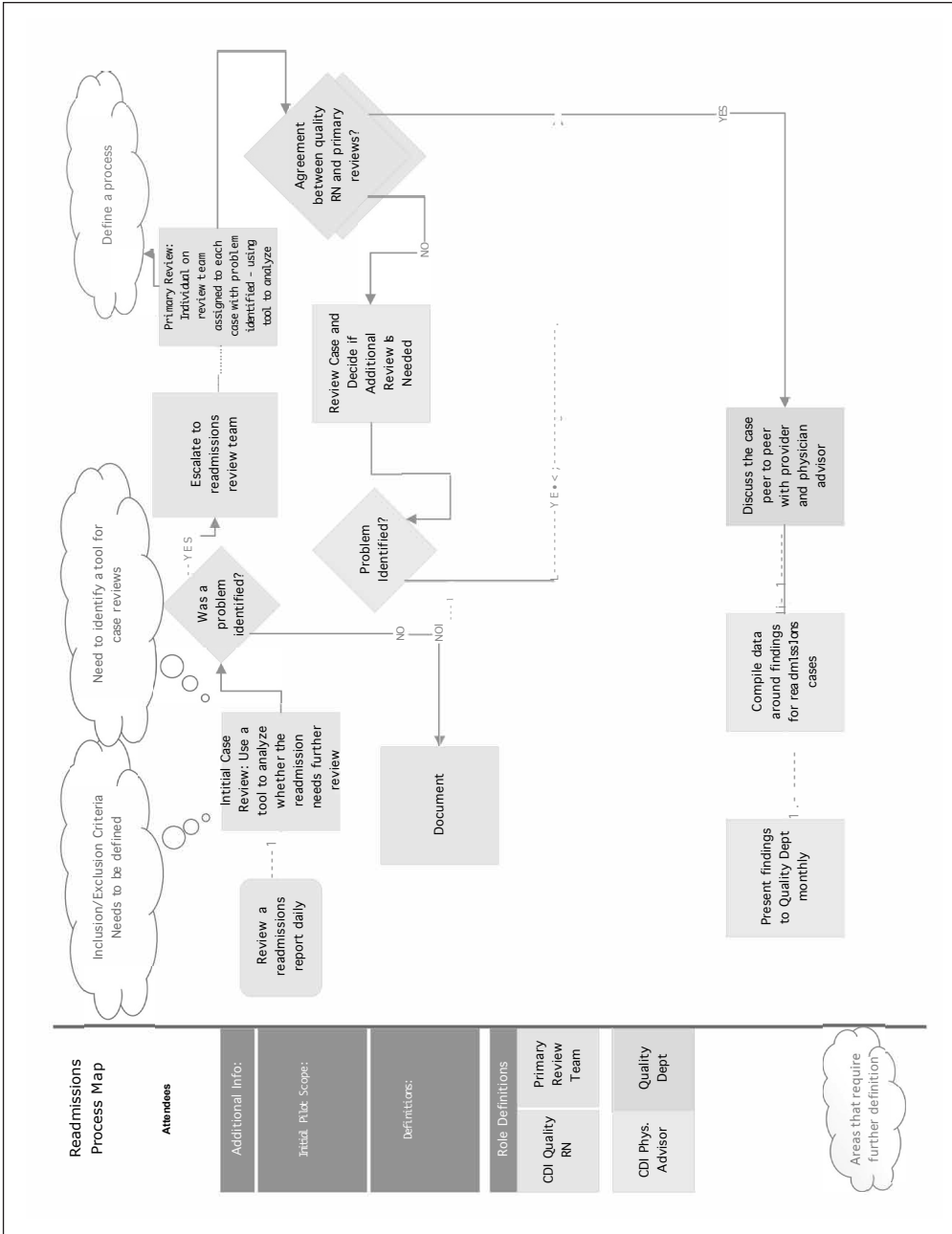
**FIGURE 10.6: TOTAL CONFIRMED PSIs**



**FIGURE 10.7: PSI 09**



**FIGURE 10.9: READMISSIONS REVIEW PROCESS**



# CDI and Quality Reporting

## How Healthcare Record Review Can Improve Outcomes

Quality of care is an emerging area of expansion for clinical documentation integrity (CDI) programs and professionals. As healthcare continues to move toward value-based purchasing and pay-for-performance reimbursement models, CDI efforts can target some of the risky diagnoses associated with quality-of-care measures to ensure that ongoing CDI reviews don't negatively affect quality scores of various types. CDI specialists and departments can use this comprehensive guide to advance to the next level of CDI—not just diagnosis review and clarification, but how diagnoses affect hospital quality metrics and influence indirect revenues.

This book will help CDI specialists:

- Gain an in-depth understanding of 2020 quality care metrics
- Implement measurable strategies for improving their hospital profiles
- Positively influence value-based incentive payments

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