medisolv

The Next Era of Patient Safety

Evolving Hospital Harm eCQMs and What it Means for You

www.medisolv.com

Erin Heilman

SVP, Regulatory Affairs

Erin Heilman is a distinguished leader in the healthcare quality regulatory space, known for her innovative approach to simplifying complex regulations. For over a decade, Erin has developed award-winning content, including articles, guides, and tools that empower quality leaders to excel in their reporting obligations.

Learning Objectives

01. Understanding CMS's Shift to Safety

02. Technical Review of Hospital Harm eCQMs

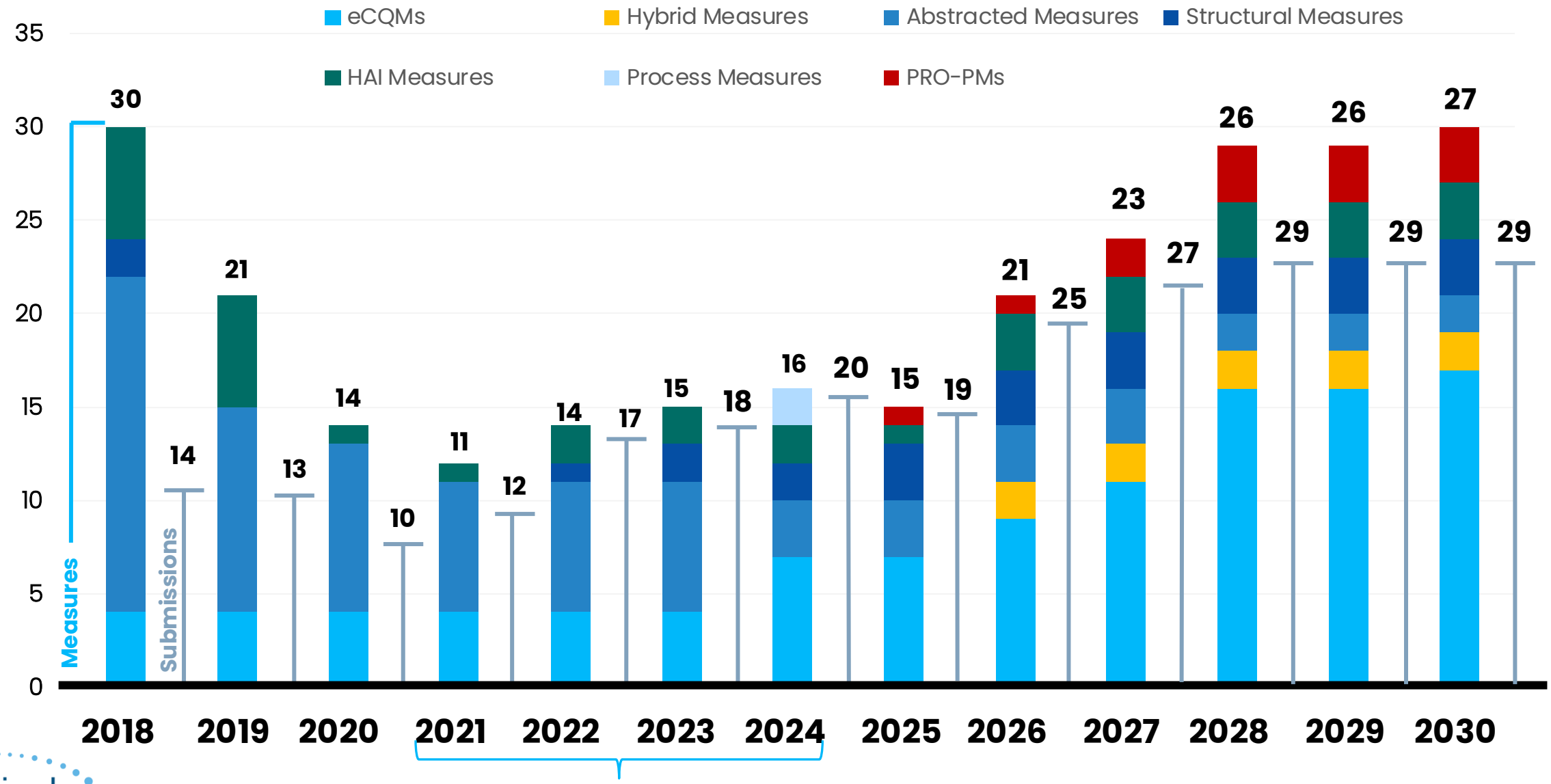
03. Getting Started (or Restarted) with eCQMs

04. Improving eCQM Results

05. Management Planning

medisolv

CMS IQR & OQR Programs Proposed



Current Public Reputation Reflects 2021 – 2024

medisolv

A Short History of Safety Measures

NHSN Develops Hospital-Acquired Infection (HAI) Measures

1970s - 1980s

AHRQ Develops Quality Indicators (QIs)

1990s

To Err is Human

1999

AHRQ Releases Patient Safety Indicators (PSIs)

2003 (Cannot Track Adverse Drug Events)

Safety Metrics Worsened

2020

CMS Releases Their Strategic Plan to Reduce Patient Harm

2021

CMS Releases the First Hospital Harm eCQM

2022

Hospital Harm eCQMs Required

BY 2028

medisolv

Hospital Harm eCQMs: Proposed Mandatory Reporting

CMS is moving from PSI-90 (claims-based) to Hospital Harm measures pulled directly from the EHR. These measures track what actually happened to patients, not whether a process was followed.

IMPACT

Performance now depends on documentation quality and clean EHR data. Weak data, weak scores.

Timeline Pattern

Newly Mandated

Falls with injury	Mandatory CY 2028
Post-op respiratory failure	Mandatory CY 2028
Post-op VTE	Mandatory CY 2030

CMS is developing a new hospital harm eCQM composite to address limitations in the current PSI 90 claims-based composite. While PSI 90 offers a standardized view of hospital patient safety using weighted, risk-adjusted components, it lacks clinical detail, is based solely on Medicare fee-for-service claims, and has significant delays due to a six-month post-submission validation period—making it less actionable for hospitals.

Summary of Hospital Harm Technical Expert Panel (TEP) Evaluation of Measures (Deliverable 4-3)

"By making the Hospital Harm eCQMs mandatory after 2 years of self-selected reporting, we ensure that we would receive a robust national dataset for measures on these important topics, and these measures could serve as potential replacements for claims-based measures, such as those reported within the Patient Safety and Adverse Events Composite (PSI 90)."

– CMS 2027 IPPS Proposed Rule

medisolv

Hospital Harm eCQM / PSI Crosswalk

Hospital Harm Composite (PSI-90 equivalent)	PSIs
Adverse Drug Events	
HH-Hyperglycemia	No Coordinating PSI
HH-Hypoglycemia	No Coordinating PSI
HH-Opioid-Related Adverse Event	No Coordinating PSI
HH-Pressure Injury	PSI 03 Pressure Ulcer Rate
HH-Acute Kidney Injury	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis Rate
HH-Post-Respiratory Failure	PSI 11 Postoperative Respiratory Failure Rate
HH-Falls with Injury	PSI 08 In-Hospital Fall-Associated Fracture Rate
HH - Anticoagulant-Related Major Bleeding *Under development. Not released.*	PSI 09: Postoperative Hemorrhage or Hematoma Rate
HH - Postoperative Venous Thromboembolism	**PSI 12 Perioperative Pulmonary Embolism or Deep-Vein Thrombosis Rate**

medisolv

2027 IPPS Proposed Rule: Electronic Clinical Quality Measures

Short Name	2026	2027	2028	2029	2030
PC-02	Required	Required	Required	Required	Required
PC-07	Required	Required	Required	Required	Required
CMS506	Required	Required	Required	Required	Required
HH-Hyper	Required	Required	Required	Required	Required
HH-Hypo	Required	Required	Required	Required	Required
HH-ORAE	Available	Required	Required	Required	Required
HH-PI	Available	Available	Required	Required	Required
HH-AKI	Available	Available	Required	Required	Required
HH-RF	Available	Used for TEAM	Required	Required	Required
HH-FI	Available	Used for TEAM	Required	Required	Required
HH-VTE	-	-	Available	Available	Required
STK-02	Available	Available	-	-	-
STK-03	Available	Available	Available	Available	Available
STK-05	Available	Available	Available	Available	Available
VTE-1	Available	Available	-	-	-
VTE-2	Available	Available	-	-	-
MCS	Available	Available	Required	Required	Required
IP-ExRad	Available	Available	Available	Available	Available
Advance Care Plan	-	-	Available	Available	Available

TEAM's quality measures focus on care coordination, patient safety, and patient reported outcomes which we believe represent areas of quality that are particularly important to patients undergoing acute procedures.

medisolv

TEAM Quality Measures

Measure Title	Eligible Episodes	Performance Years (PY)	Sourced From
Hybrid Hospital-Wide Readmission	All	PY 1-5	Inpatient Quality Reporting (IQR)
THA/TKA PRO-PM	LEJR episodes only	PY 1-5	Inpatient Quality Reporting (IQR)
PSI 90	All	PY 1	HAC Reduction Program
HH-Falls w/ Injury	All	PY 2-5	Inpatient Quality Reporting (IQR)
HH-Postoperative Respiratory Failure	All	PY 2-5	Inpatient Quality Reporting (IQR)
Failure to Rescue	All	PY 2-5	Inpatient Quality Reporting (IQR)
Information Transfer PRO-PM	HOPD – LEJR + Spinal Fusion	PY 3-5	Outpatient Quality Reporting (OQR)

CMS 2026 OPPS changes to the Hospital Quality Star Ratings:

CY 2026

Apply a cap of 4 stars to any hospital that is initially assigned 5 stars but has a Safety of Care score in the lowest-performing quartile (based on at least three Safety of Care measures).

CY 2027

CMS will reduce the Overall Hospital Quality Star Rating of any hospital in the lowest quartile of the Safety of Care measure group by 1 star, to a minimum 1-star rating (based on at least three measure scores).

medisolv

Star Ratings Measure List

Category: Safety of Care

Measure ID	Measure name
COMP-HIP-KNEE	Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA)
HAI-1	Central-Line Associated Bloodstream Infection (CLABSI)
HAI-2	Catheter-Associated Urinary Tract Infection (CAUTI)
HAI-3	Surgical Site Infection from Colon Surgery (SSI-colon)
HAI-4	Surgical Site Infection from Abdominal Hysterectomy (SSI-abdominal hysterectomy)
HAI-5	MRSA Bacteremia
HAI-6	Clostridium Difficile (C.difficile)
PSI 90	**Patient Safety and Adverse Events Composite**

A Review of the Hospital Harm eCQMs

medisolv

CMS 816 / HH-Hypo Hospital Harm – Severe Hypoglycemia

Required in 2026

medisolv

Hospital Harm – Severe Hypoglycemia

HH-Hypo

This measure focuses on severe hypoglycemia as an outcome in the hospital inpatient setting. In a study published by the Office of the Inspector General, adverse drug events represented 43% of all adverse events in hospitals among Medicare patients; of those events, *hypoglycemia was among the top 5 adverse drug events.* Inpatient hypoglycemia can be life-threatening and is associated with longer hospital stays and increased medical costs.

The measure assesses the number of inpatient hospitalizations for patients age 18 and older who were administered at least one hypoglycemic medication during the encounter and who suffer the harm of a severe hypoglycemic event during the encounter.

Inverse Measure: Yes
Risk Adjusted: No
Required: Yes

CMS 816 / HH-Hypo

INVERSE MEASURE

Initial Population / Denominator

- Inpatient Encounter
- ≥18 years of age
- At least one hypoglycemic medication administered during the encounter

No Exclusions or Exceptions

Numerator

- A Severe Hypoglycemic Event, which is defined as
  - A blood glucose result <40 mg/dL AND
  - A hypoglycemic medication given within 24 hours before the blood was collected for the glucose test AND
  - No subsequent repeat blood glucose test with a result >80 mg/dL occurs within 5 minutes after the initial glucose test result <40 mg/dL.
- Only one qualifying severe hypoglycemic event is counted in the numerator, and only one severe hypoglycemic event is counted per encounter.
- The 24-hour and 5-minute timeframes are based on the time the blood glucose was drawn, since this reflects the time that the patient was experiencing that specific blood glucose level.

medisolv

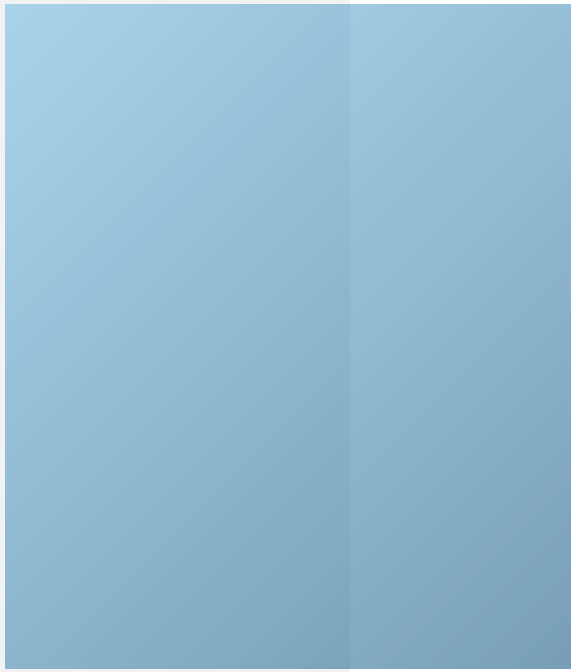
CMS 871 / HH-Hyper Hospital Harm – Severe Hyperglycemia

Required in 2026

medisolv

Hospital Harm – Severe Hyperglycemia

HH-Hyper



Hyperglycemia, i.e., elevated glucose level, is common among hospitalized patients, especially those with preexisting diabetes and accounts for over 30% of noncritically ill hospitalized patients. Hyperglycemia can also affect individuals with no prior history of diabetes and may be induced by medications such as steroids, or parenteral or enteral feeding. Severe hyperglycemia, is significantly associated with a range of harms, including increased in-hospital mortality, infection rates, and hospital length of stay.

Assesses the number of inpatient hospital days with a hyperglycemic event (harm) per the total qualifying inpatient hospital days for that encounter.

Inverse Measure: Yes
Risk Adjusted: No
Required: Yes

CMS 871 / HH-Hyper

Initial Population / Denominator

- Inpatient encounter
- ≥ 18 years of age
- Any one of the following:
  - Diagnosis of diabetes that starts before the end of the encounter
  - Administration a hypoglycemic medication that starts during the encounter
  - Presence of at least one blood glucose result ≥ 200 mg/dL at any time during encounter

Exclusions

- Glucose result of > 600 mg/dL that occur 1 hour prior to the start of the encounter (ED, OBS or IN) *to* 6 hours after the start of the encounter
- Comfort care measures ordered or provided during the encounter.
- Discharge disposition to home for hospice care or to a health care facility for hospice care.

Numerator

- Hyperglycemic event within first 10 days of the encounter minus the first 24 hours, and minus the last period before discharge if < 24 hours. Hyperglycemic event defined as:
  1. A day with a blood glucose value > 300 mg/dL; OR
  2. A day where a glucose test and result was not found, and it was immediately preceded by two contiguous, consecutive days where at least one glucose value during each of the two days was ≥ 200 mg/dL

medisolv

CMS 819 / HH-ORAE
Opioid Related Adverse Events

Voluntary reporting for CMS IQR in 2026; Required in 2027

medisolv®

Hospital Harm – Opioid Related Adverse Events

HH-ORAE

Opioids are often the foundation for sedation and pain relief. Opioid-based analgesia continues to be the most common treatment in postoperative pain management, with more than 95% of surgical patients receiving opioids during their hospitalization. However, use of opioids can also lead to serious adverse events, including constipation, over sedation, delirium, and respiratory depression. Opioid-related adverse events have both patient-level and financial implications. The presence of an ORAE was associated with a 55% longer postoperative length of stay, 29% lower odds of discharge home, and 2.9 times the odds of death. Patients who experienced ORAEs while in the hospital were more likely to have received a higher total dose of opioids during hospitalization.

This measure assesses the number of inpatient hospitalizations for patients age 18 and older who have been administered an opioid medication outside of the operating room and are subsequently administered a non-enteral opioid antagonist outside of the operating room within 12 hours, an indication of an opioid-related adverse event.

Inverse Measure: Yes
Risk Adjusted: No
Required 2026: No (Mandatory 2027)

CMS 819 / HH-ORAE

Initial Population / Denominator

- Inpatient Encounter
- ≥ 18 years of age
- Opioid administration during the encounter

Exclusions / Exceptions

- None

Numerator

- Encounter with Non-Operating Room Opioid and Non-enteral Antagonist administered:
  - Outside of the operating room 12 hours or less following Opioid administration outside of the operating room

medisolv

2026: CMS 832 / HH-AKI Hospital Harm Acute Kidney Injury

Voluntary Reporting for CMS IQR in 2026 - 2027
(Required 2028)

medisolv

Hospital Harm – Acute Kidney Injury

HH-AKI

Acute kidney injury affects up to 10% of hospitalized patients, comparable to the rates of severe sepsis and acute lung injury. Up to two thirds of intensive care patients will develop acute kidney injury. Acute kidney injury may result in the need for dialysis and is associated with an increased risk of mortality.

While not all instances of acute kidney injury are avoidable, a proportion of acute kidney injury cases are preventable and treatable.

HH-AKI measures the proportion of inpatient hospitalizations for patients 18 years and older who have an acute kidney injury (stage 2 or greater) that occurred during the encounter.

Inverse Measure: Yes
Risk Adjusted: Yes
Required 2026: No (Mandatory 2028)

HH-AKI

Initial Population/Denominator

- Inpatient Encounter
- ≥ 18 years of age
- Length of Stay of 48hrs or more
- At least one serum creatinine value 48hrs or more after encounter start. *Index creatinine is the lowest within 24hrs of arrival (or first w/in 48hrs if none earlier)*
- No obstetrical or pregnancy-related conditions

Numerator

- Two-times or greater increase in serum creatinine compared to the lowest prior value within 7 days **Or**
- Dialysis started more than 48hrs after arrival

Exclusions

- Increase of > 0.299 mg/dL in creatinine between the index creatinine and a subsequent value within 48hrs of encounter start
- Index eGFR < 60 within the first 48hrs of encounter start (using the CKD-EPI race-neutral formula)
- Fewer than two creatinine results within the first 48hrs of encounter start
- Dialysis started ≤ 48hrs after arrival without evidence of a two-times increase in creatinine
- Encounter with a high-risk diagnosis for AKI present on admission or clinically undetermined
- Encounter with high-risk procedures for AKI

Encounters with missing or inaccurate sex or POA data may affect measure inclusion or exclusion

medisolv

HH-AKI

Risk Variables below are submitted in the QRDA file for adjustment by CMS.

- Sex and Age
- First vital signs in Encounter (plus UOM)
  - Temperature
  - Heart Rate
  - Respiratory Rate
  - Systolic Blood Pressure
- Estimated glomerular filtration rate calculated using the index serum creatinine, patient sex, and age-based formula
- All encounter diagnoses with present on admission indicators (collected for development of baseline risk adjustment model). Targeted diagnoses at the time of development include:
  - Cancer (leukemia, lymphoma, or metastatic cancer)
  - Diabetes
  - Heart failure
  - Hypertension
  - Obesity
- Encounter length of stay

medisolv

2026: CMS 826 / HH-PI
Hospital Harm Pressure Injury

Voluntary Reporting for CMS IQR in 2026 - 2027
(Required 2028)

medisolv

Hospital Harm – Pressure Injury

HH-PI

Hospital-acquired pressure injuries are serious events and one of the most common patient harms. The incidence of pressure injuries in hospitalized patients has been estimated at 5.4 per 10,000 patient-days and the rate of hospital-acquired pressure injuries has been estimated at 8.4%. Over 50% of reported pressure injuries in hospitals were stage 2 or higher. Pressure injuries commonly cause local infection, osteomyelitis, anemia, and sepsis, in addition to causing significant depression, pain, and discomfort to patients.

The measure assesses the number of inpatient hospitalizations for patients aged 18 and older who suffer the harm of developing a new stage 2, stage 3, stage 4, deep tissue, or unstageable pressure injury.

Inverse Measure: Yes
Risk Adjusted: No
Required 2026: No (Mandatory 2028)

CMS 826 / HH-PI

Initial Population / Denominator

- Inpatient encounter
- Age ≥ 18 years

Exclusions

- Deep Tissue Pressure Injury (DTPI) or stage 2, 3, 4 or unstageable pressure injury diagnosis present on admission
- DTPI found on exam within 72 hours after the start of the encounter
- Stage 2, 3, 4, or unstageable pressure injury found on exam within 24 hours after the start of the encounter

Numerator

New deep tissue pressure injury (DTPI) or stage 2, 3, 4, or unstageable pressure injury, as evidenced by any of the following:

- A DTPI or stage 2, 3, 4, or unstageable pressure injury diagnosis not present on admission as indicated by a present on admission indicator of N or U.
- A DTPI found on exam greater than 72 hours after the start of the encounter.
- A stage 2, 3, 4 or unstageable pressure injury found on exam greater than 24 hours after the start of the encounter.

medisolv

HH-FI (CMS 1017)
Hospital Harm – Falls with Injury

Voluntary Reporting for CMS IQR in 2026 - 2027
(TEAM Model 2027) (Proposed Required 2028)

medisolv

Hospital Harm – Falls with Injury

HH-FI

Inpatient falls are among the most common incidents reported in hospitals, can increase length of stay and costs, and are considered a Serious Reportable Event. Falls can result in injury ranging from minor abrasion or bruising to death. Major injuries have the biggest impact on patient outcomes, but data shows 41.8% of falls resulted in moderate injuries such as skin tear, avulsion, hematoma, significant bruising, dislocations and lacerations requiring suturing.

This measure assesses the number of inpatient hospitalizations where at least one fall with a major or moderate injury occurred among the total qualifying inpatient hospitalizations 18 years and older.

Inverse Measure: Yes
Risk Adjusted: Yes
Required 2026: No (Proposed Mandatory 2028)

HH-FI

Initial Population/Denominator

- Inpatient Encounter
- ≥18 years of age
- LOS ≤ 120 days

Denominator/Numerator Exclusions

- Fall Diagnosis present on admission or clinically undetermined

Numerator

- Inpatient Fall Event/Diagnosis during encounter with
  - Major injury (not present on admission, documentation insufficient to determine, POA indicator NULL)

  Or
  - Moderate injury (not present on admission, documentation insufficient to determine, POA indicator NULL)

Measure Observations:

- Observation 1 = Total number of hospital days for all qualifying patients minus exclusions
- Observation 2 = Total number of numerator cases (number of patients with an inpatient fall with injury)

*Reported as the number of inpatient hospitalizations with falls with moderate or major injury per 1000 patient days

medisolv

HH-FI

Risk Variables

- Medications active on admission: - anticoagulants - antidepressants - antihypertensives - central nervous system depressant medications - diuretics – opioids
- Anticoagulant medications administered during the hospitalization
- Diagnoses present on admission which may increase the risk for a fall with injury: abnormal weight loss - malnutrition - coagulation disorders - delirium, dementia, or other psychosis - depression - epilepsy - leukemia or lymphoma - liver disease (moderate to severe) - malignant bone disease - neurologic movement and related disorders - obesity - osteoporosis - peripheral neuropathy - stroke - suicide attempt
- BMI
- All encounter diagnoses with rank (e.g., 1, 2, 3) and present on admission (POA) indicators

CMS 1218 / HH-RF
Hospital Harm – Postoperative Respiratory Failure

Voluntary Reporting for CMS IQR in 2026 - 2027
(TEAM Model 2027) (Proposed Required 2028)

medisolv

Hospital Harm – Postoperative Respiratory Failure

HH-RF

PRF is defined as unplanned endotracheal reintubation, prolonged inability to wean from mechanical ventilation, or inadequate oxygenation and/or ventilation. PRF is the most common serious postoperative pulmonary complication, with an incidence of up to 7.5%. PRF can increase the risk of morbidity and mortality, with in-hospital mortality resulting from PRF estimated at 25% to 40%

This measure assesses the number of elective inpatient hospitalizations for patients aged 18 years and older without an obstetrical condition who have a procedure resulting in postoperative respiratory failure.

Inverse Measure: Yes
Risk Adjusted: Yes
Required 2026: No (Proposed Mandatory 2028)

HH-RF

Initial Population/Denominator

- Elective inpatient encounter (includes inpatient admissions from outpatient surgery – new encounter type that needs to be mapped like IN/OBS/ED)
- Encounter class elective qualifier value
- Without an ED visit
- ≥18 years of age
- Surgical Anesthesia Procedure within 3 days of encounter start (uses first procedure if more than one)
- Without OB Condition

Exclusions

- Degenerative Neurological Disorder
- High Risk to Airway Head Neck and Thoracic Surgery
- Mechanical Ventilation that Starts More than One Hour Prior to Start of First OR Procedure
- Neuromuscular Disorder
- PaCO2 Greater Than 50 and Arterial pH Less Than 7.30 within 48 Hours Prior to Start of First OR Procedure
- PaO2 Less Than 50 within 48 Hours Prior to Start of First OR Procedure
- Principal Diagnosis of Acute Respiratory Failure with Rank of 1
- Diagnosis of Acute Respiratory Failure Present on Admission
- Tracheostomy Present on Admission
- Tracheostomy Prior to or on the Same Day of First OR Procedure

HH-RF

Numerator

Intubation *outside of procedural area* ***and*** within 30 days after the end of the first OR procedure time (based on anesthesia end time)

or

MV that occurs *outside of procedural area* within 30 days after the end of the first OR procedure **and**

- is preceded by a period of non-invasive oxygen therapy between the end of the OR procedure and the MV occurrence **and**
- without a subsequent OR procedure between the non-invasive oxygen therapy and the MV occurrence

or

Extubation outside of a procedural area more than 48hrs after the end of OR procedure **and**

- is within 30 days after the end of the first OR procedure **and**
  - is not preceded by period of non-invasive oxygen therapy **or**
  - is not extubated during general anesthesia

or

MV between 48 and 72 hours after the end of an OR procedure **and**

- within 30 days after the end of the first OR procedure **and**
  - is not preceded by a non-invasive oxygen therapy **or**
  - a subsequent OR procedure between the end of the OR procedure and the MV occurrence

HH-RF

Risk Variables:

First resulted vital sign values:

- Body temperature Cel, [degF]
- Heart rate {Beats}/min
- Respiratory rate {Breaths}/min
- Systolic blood pressure: mm[Hg]

First resulted laboratory test values:

- Albumin g/dL, umol/L
- Aspartate aminotransferase (AST/SGOT) U/L, IU/L
- Bicarbonate mmol/L
- Bilirubin mg/dL, umol/L
- Blood urea nitrogen (BUN) mg/dL, umol/L
- Carbon dioxide (partial pressure) mm[Hg]
- Creatinine mg/dL, umol/L
- Hematocrit %
- Hemoglobin g/dL, mmol/L
- Leukocyte count {cells}/uL, 10*3/uL, 10*9/L, /mm3
- Oxygen (partial pressure) mm[Hg]
- pH of arterial blood [pH]
- Platelet count 10*3/uL, 10*9/L, /mm3
- Sodium meq/L, mmol/L
- White blood cell count {cells}/uL, 10*3/uL, 10*9/L, /mm3

Additional variables used for risk adjustment:

- American Society of Anesthesiologists (ASA) physical status class assessment
- First Body mass index (BMI), reported using UCUM unit: kg/m2
- All encounter diagnoses with their present on admission (POA) indicators + Rank
- All major surgical procedures
- Most recent smoking status

medisolv

CMS1061 / HH-VTE Hospital Harm – Postoperative Venous Thromboembolism

Voluntary Reporting for CMS IQR in 2028 - 2029
(Proposed Required 2030)

medisolv

Hospital Harm – Postoperative Venous Thromboembolism

HH-VTE

Postoperative venous thromboembolism (VTE) includes deep vein thrombosis (DVT) and pulmonary embolism (PE) occurring after surgery. DVT is linked to poor clinical outcomes including post-thrombotic syndrome, anticoagulation-related bleeding, and death. During 2019, 2021, and 2022, patients in the United States experienced 51,586 perioperative VTEs, signaling ongoing opportunities to reduce postoperative VTE rates through evidence-based prevention strategies such as mechanical and pharmacologic prophylaxis.

This measure assesses the proportion of inpatient encounters for patients aged 18 years and older who have at least one surgical procedure performed inside the operating room during the encounter and who suffer the harm of a postoperative VTE during the encounter or within 30 days after the first surgical procedure.

Inverse Measure: Yes
Risk Adjusted: Yes
Required 2026: No (Proposed Available 2028, Mandatory 2030)

HH-VTE

Risk Variables:

The measure's initial risk model includes the following factors:

- Sex
- Age
  - Stratified into bands in the risk model: 18–29, 30–39, 40–49, 50–59, 60–69, 70–79, and 80+.
- Bleeding disorders
- Cancer
- Central venous catheter (CVC) insertion
- History of venous thromboembolism (VTE)
  - Defined as either a VTE risk assessment with a result of "high risk" during or before the encounter, OR a history of VTE as a diagnosis during or before the encounter.
- Obesity
- Respiratory operations
- Stroke
- Vascular surgery

Additional factors captured for potential future model modification:

- Diabetes
- Fractures
- Hip/knee replacement
- Hormone therapy use
- Immobility
- Tobacco use

medisolv

Getting Started (or Restarted!) with eCQMs

medisolv

Understanding Electronic Clinical Quality Measures

eCQM Process

PREPARATION & PLANNING

Education

Rule analysis, spec updates, value set & code changes

Discovery

Requirements identification, gap analysis, impact assessment

Build & Map

Technical architecture, data flows, update mapped codes, implementation strategy

CORE eCQM PROCESS

IMPLEMENT

CQL logic, data elements, codes

→

CAPTURE

Structured data documented

→

CALCULATE

Data extraction & calculation

→

IMPROVE

Analyze results for opportunities

SUPPORTING ACTIVITIES

Validate

Verify measure populations and confirm data accuracy & completeness

Optimize

Improve processes, address feedback, enhance performance

Submission

Submit QRDA files to regulatory bodies

medisolv

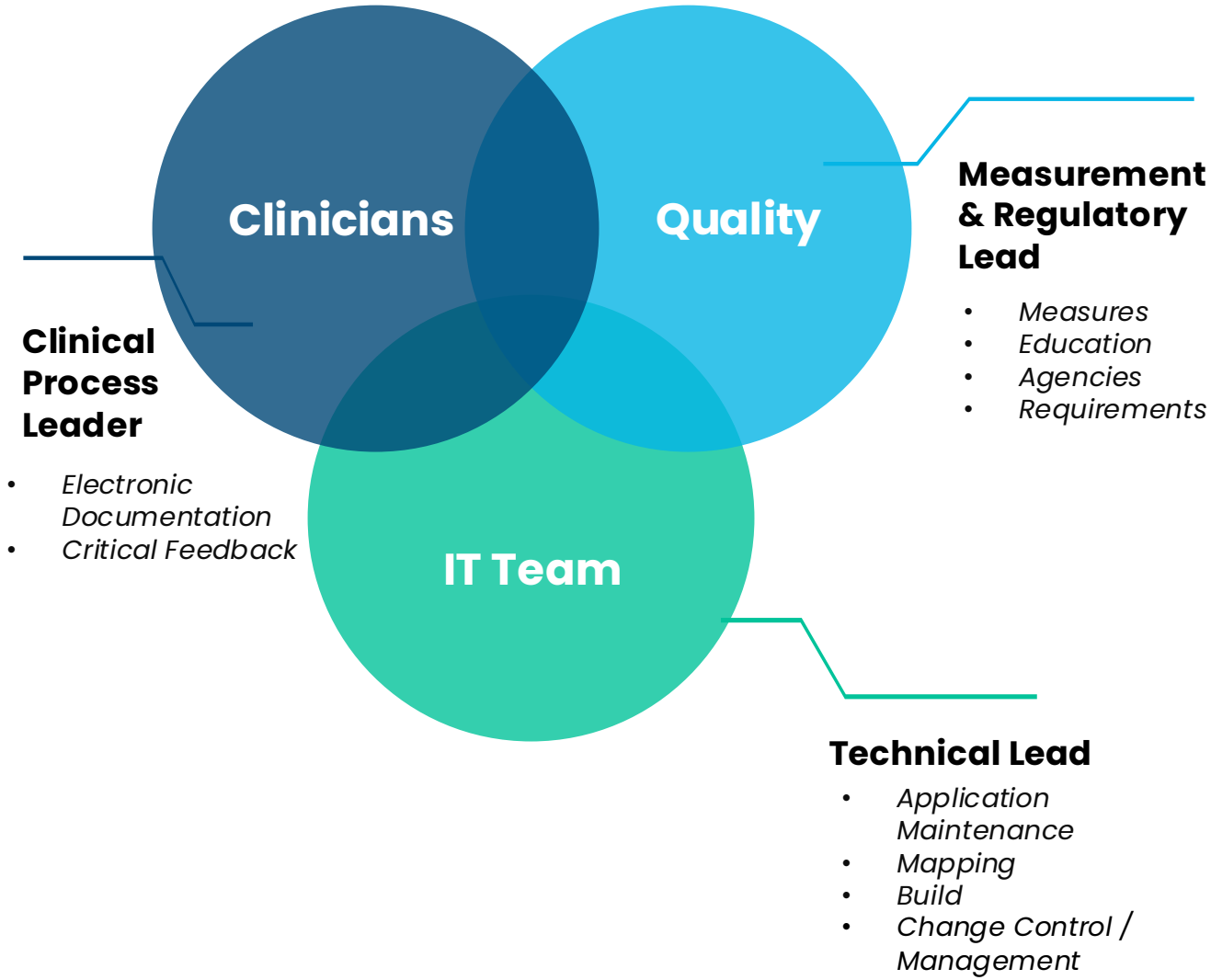
eCQM Data Management

Data Management is Key!

- Successful eCQM management requires a structured data management plan to ensure the accuracy and integrity of your data. Helps healthcare organizations maintain accurate and usable patient records and ensures that the information meets regulatory requirements.
  - Organizing and handling of data
  - Ensuring data is collected, stored, processed, and used effectively
  - Applying relevant codes
  - Safely storing it in a database
  - Ensuring it is in the correct format for various uses such as generating regulatory files like QRDA I
  - Keeping track of where the information came from within the EHR system to ensure accuracy and compliance.

eCQM Management Plan

- eCQM management team: representatives from both the IT and Quality teams must be involved.
- Collaborate on data management processes
- Determine Ownership
- eCQM data capture, accuracy, completeness, mapping, storage, and QRDA file components.



medisolv

eCQM Management Plan

Education

- Educate team members. Make sure all stakeholders understand the basics of eCQMs, the significance of failing an audit, and are committed to your data management goals.
- Identify and share resources

eCQM Management Plan

Start with a self-audit then track changes every year

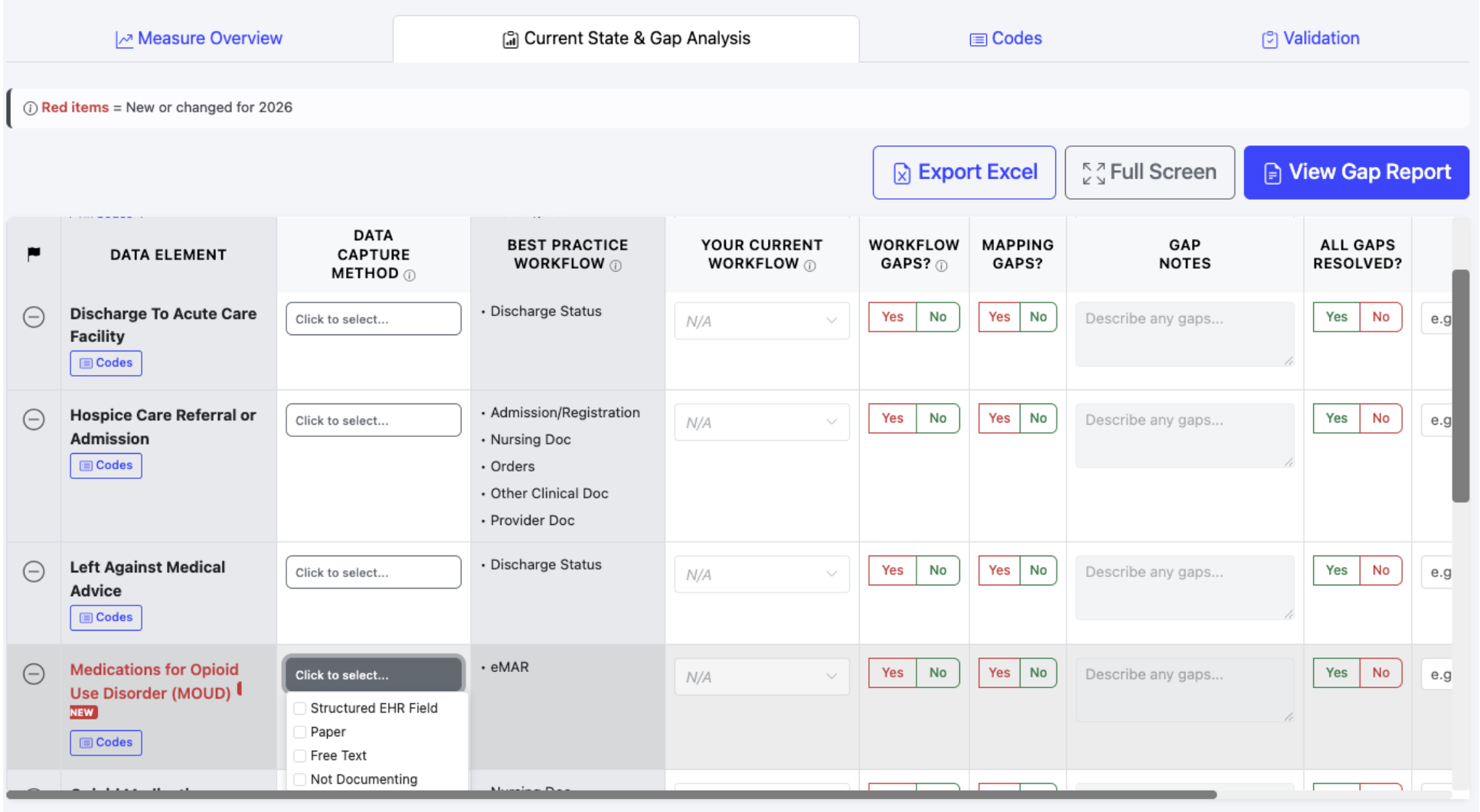
Develop a system for tracking your eCQM data capture processes that can be used as a central resource for eCQM management and for audit prep.

- Identify the eCQMs being tracked and submitted by your hospital every year.
- Document each data element included in each measure.
- Review EHR documentation process for each data element:
  - ✓ Identify where in the EHR the data element is/could be documented
  - ✓ Who documents
  - ✓ Structured vs Unstructured vs Paper
  - ✓ EHR identifiers
  - ✓ Mapping

Population	Data Element	Data Capture Workflow	Code Type	EHR ID	Primary "Documenter"	Relevant Unit/Location	Comment
Denominator	Opioid or Benzodiazepine	Discharge Order	RXNORM				
	Inpatient Encounter	Admission/Registration	SNOMED	ENCOUNTER			
Exclusions	Cancer Related Pain	Coding Problem List	ICD SNOMED			ONC floor only?	1 ICD code in value set – build out documentation for this; don't think coding will capture
	Sickle Cell Disease	Coding Problem List	ICD SNOMED				
	Opioid Use Disorder Diagnosis	Coding Problem List	ICD SNOMED				
	Treatment for Opioid Use Disorder - Medication AND Treatment Intervention	Med Rec Orders Clinical Documentation	RXNORM SNOMED	This is new in 2025, do we document?			Both the medication and treatment intervention must be present with relevant codes to qualify as an exclusion
	Hospice or Palliative Care	Order	SNOMED	PCARE.ORD1	On consult order by clinician	n/a	Confirm we don't document this anywhere else; Palliative care notes?
	Acute Care Hospital, Hospice Care Referral or Admission, Expired, Left AMA	Discharge Status	SNOMED	DISCHARGE	Captured during dc process	n/a	Review mapping – code changes for AMA & Expired
Numerator	2 or more Opioids or Opioid & Benzodiazepine	Discharge Order	RXNORM				

eCQM Readiness Playbook: CMS 506 Example

For Medisolv Quality Academy Members



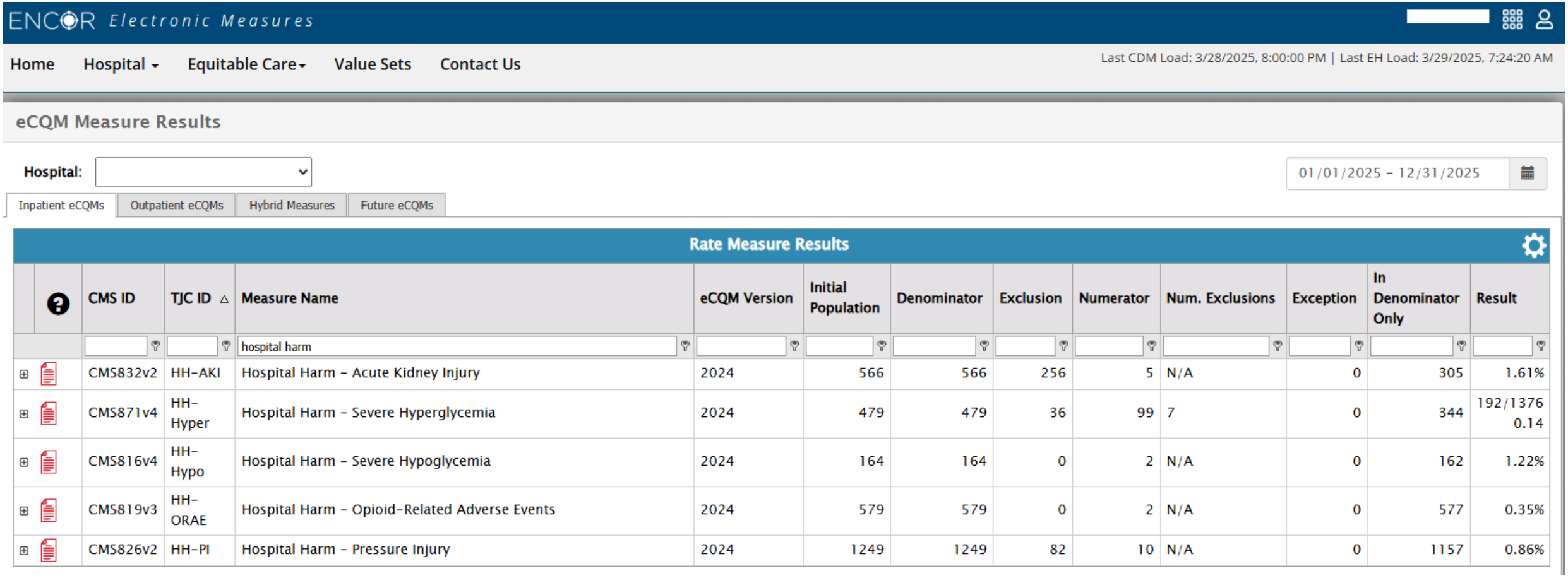
medisolv

Improving eCQM Results

medisolv

Understanding Fallouts

medisolv



CMS ID	TJC ID	Measure Name	eCQM Version	Initial Population	Denominator	Exclusion	Numerator	Num. Exclusions	Exception	In Denominator Only	Result
CMS832v2	HH-AKI	Hospital Harm - Acute Kidney Injury	2024	566	566	256	5	N/A	0	305	1.61%
CMS871v4	HH-Hyper	Hospital Harm - Severe Hyperglycemia	2024	479	479	36	99	7	0	344	192/1376 0.14
CMS816v4	HH-Hypo	Hospital Harm - Severe Hypoglycemia	2024	164	164	0	2	N/A	0	162	1.22%
CMS819v3	HH-ORAE	Hospital Harm - Opioid-Related Adverse Events	2024	579	579	0	2	N/A	0	577	0.35%
CMS826v2	HH-PI	Hospital Harm - Pressure Injury	2024	1249	1249	82	10	N/A	0	1157	0.86%

CMS871v3	HH-Hyper	Hospital Harm – Severe Hyperglycemia	2023	44	44	0	7	0	37	13/168 0.08

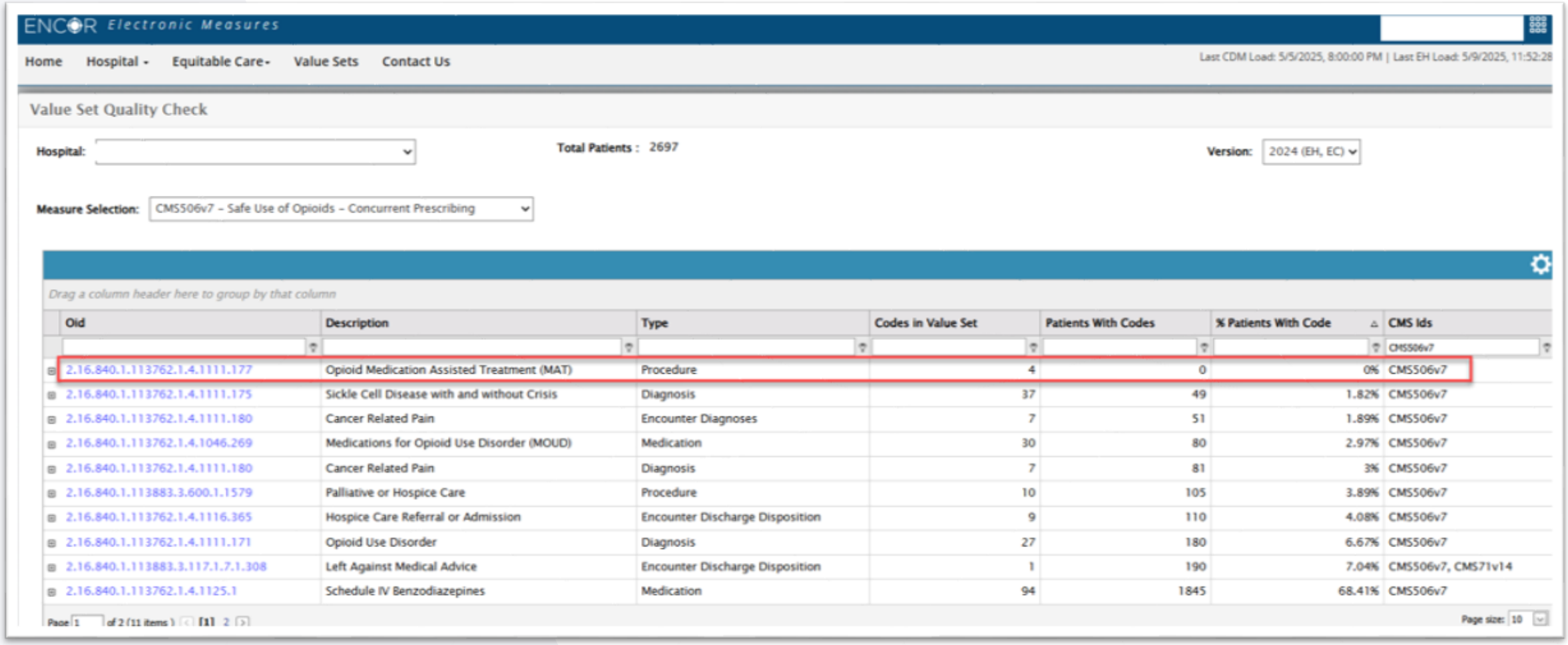
Rate Measure Results Details

Drag a column header here to group by that column

Patient Name	Medisolv Identifier	Case Identifier	Result	Admit	Discharge	Age	Discharge Location	Discharge Disposition	Qualifying Encounter LOS	Measure Observation
			numerator							
Roach, Raymond	667346a89913801884424b67	AC10000279975	In Numerator	2/24/2024 10:39:00 AM	2/27/2024 3:23:00 PM	79	Location 726	Discharge to acute care hospital (procedure)	3	2:1
Travis, Simone	6673470a991380188450d578	AC10000251022	In Numerator	1/1/2024 3:25:00 PM	1/6/2024 10:00:00 PM	66	Location 726	Discharge to acute care hospital (procedure)	5	4:1
Cipolla, Armine	6673475e99138018845faa69	AC10000274378	In Numerator	1/8/2024 3:19:00 PM	1/12/2024 12:00:00 PM	80	Location 726		4	2:2
Hyman, Lorraine	667346ae9913801884440d92	AC10000256967	In Numerator	1/12/2024 11:47:00 PM	1/22/2024 4:05:00 PM	89	Location 726		10	8:1
Mirsky, Stanley	6673478f991380188468401a	AC10000273487	In Numerator	12/29/2023 4:05:00 PM	1/4/2024 1:55:00 PM	62	Location 726		6	4:2

Codes	Description	Collection Time	Status	Documentation	Result	Unit	Used
	glucose						
Loinc:41653-7	Glucose [Mass/volume] in Capillary blood by Glucometer	1/28/2025 9:16:00 PM	performed	CDM.LabTestComponents, DataSource: laboratory_results, TOM107_CHILD_ORDER, TLB800_TEST_CODE_MST, Code:41653-7	346.0	mg/dL	
Loinc:41653-7	Glucose [Mass/volume] in Capillary blood by Glucometer	1/29/2025 8:55:00 PM	performed	CDM.LabTestComponents, DataSource: laboratory_results, TOM107_CHILD_ORDER, TLB800_TEST_CODE_MST, Code:41653-7	305.0	mg/dL	

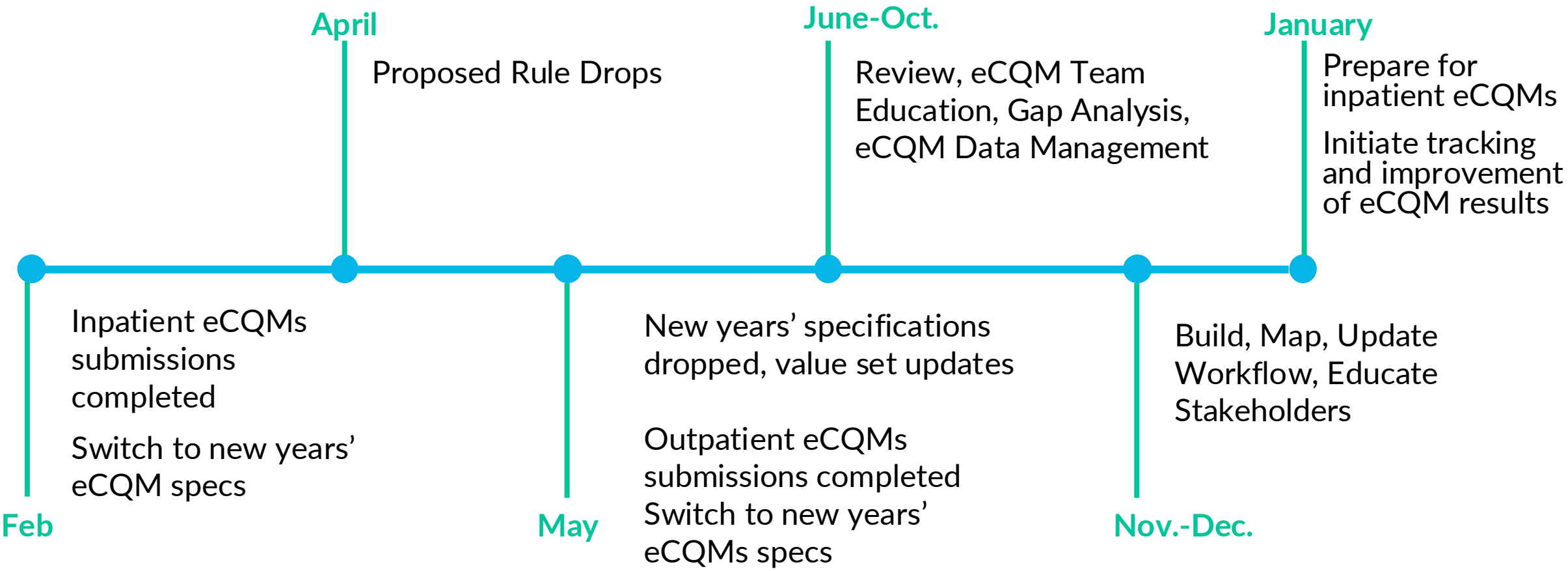
Codes	Description	Status	Start Time
		admin	
RxNorm:855312	warfarin sodium 2.5 MG Oral Tablet	administered	1/30/2025 2:31:00 PM
RxNorm:835603	tramadol hydrochloride 50 MG Oral Tablet	administered	1/30/2025 11:19:00 PM
RxNorm:835603	tramadol hydrochloride 50 MG Oral Tablet	administered	1/31/2025 7:50:00 AM
RxNorm:855312	warfarin sodium 2.5 MG Oral Tablet	administered	1/31/2025 1:26:00 PM
RxNorm:835603	tramadol hydrochloride 50 MG Oral Tablet	administered	1/31/2025 4:03:00 PM



Managing the Annual eCQM Cycle

medisolv

Annual eCQM Cycle



medisolv

eCQM Data Management Plan

Frequency + Timelines

Agree on and commit to timelines for eCQM data review and frequency of review. How often will you meet as a team? How will you communicate gaps, status, dependencies? — it is imperative your review processes align with:

1. **Annual regulatory updates** - know when new measures are added, and when specifications and codes are updated
2. The eCQM reporting period start and end date
3. Submission window open & close
4. Specific submission plans and timing
5. Validation selection timing

medisolv

eCQM Management Plan

Be aware of and plan for other changes that might impact your eCQM data.

01

Documentation – new, updates, changes

02

Mapping & formulary vendor updates

03

EHR and other vendor software updates + migrations

medisolv

eCQM Management Plan

Reference previous audits

E	F	G	H	I	J	K	L	M
Program	Payment Year	Included Quarters	Confidence Interval Upper Bound	Confidence Interval Lower Bound	Overall Yearly Estimated Reliability	Validation Sample Size	Total Case Population	Met eCQM Medical Record Submission Requirement
	2025	1Q 2022 - 4Q 2022	98%	83%	91%	32	180	Y

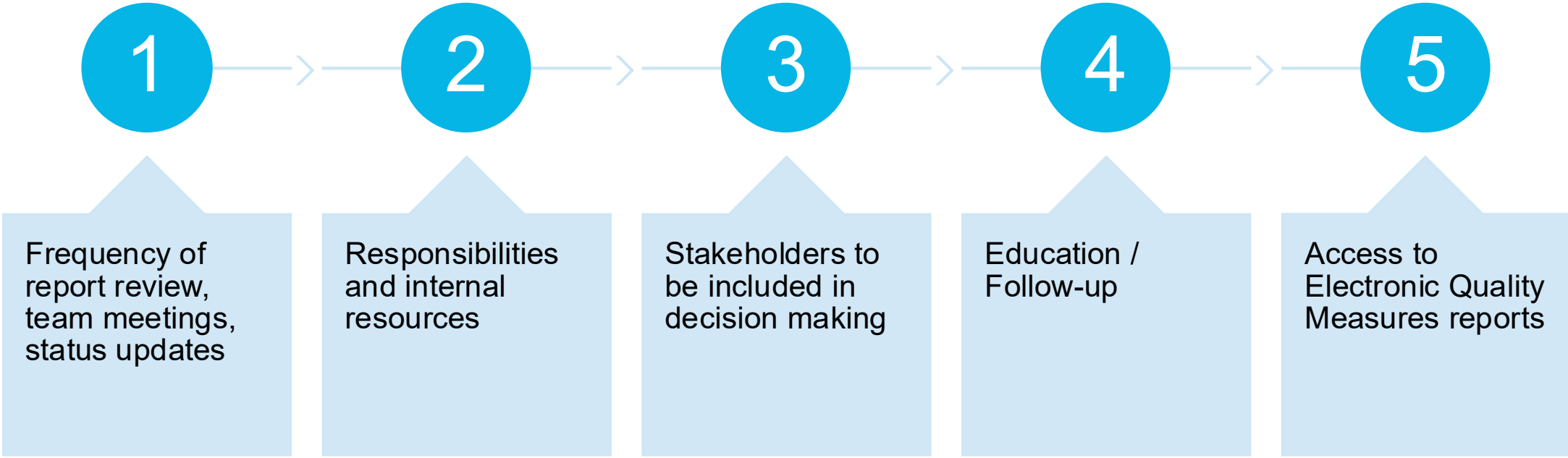
X	Y	Z	AA	AB	AC	AD	AE	AF
Origin	Validat	Original Outcome - Denominator Exclusion	Validated Outcome - Denominator Exclusion	Original Outcome - Numerator	Validated Outcome - Numerator	Origin	Validat	Result
Met	Met	No Exclusions	No Exclusions	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match

AF	AG
Result	Element Name
Mismatch	Emergency Department discharge date
Mismatch	Departure date from Emergency Department
Mismatch	Transfer from a hospital setting
Mismatch	Emergency Department encounter leading to this admission
Mismatch	Departure time from Emergency Department
Mismatch	Inpatient Encounter admission date
Mismatch	Admit to Inpatient date
Mismatch	Admit to Inpatient time
Mismatch	Inpatient Encounter admission time
Mismatch	Inpatient Encounter <= 120 days
Mismatch	Inpatient Encounter discharge date
Mismatch	Emergency Department discharge time
Mismatch	Emergency Department admission date
Mismatch	Inpatient Encounter discharge time
Mismatch	Principal diagnosis of Psychiatric/Mental Health Patient
Mismatch	Admit to Inpatient
Mismatch	Emergency Department admission time
Mismatch	Inpatient Encounter discharge time
Mismatch	Arrival time to Observation Services
Mismatch	Comfort Measures Time
Mismatch	Departure time from Emergency Department
Mismatch	Principal diagnosis during Inpatient Encounter
Mismatch	Observation Services
Mismatch	Comfort Measures Ordered or Performed
Mismatch	Statin prescribed at discharge
Mismatch	Inpatient Encounter discharge date
Mismatch	Inpatient Encounter admission date
Mismatch	Emergency Department encounter leading to this admission
Mismatch	Departure date from Emergency Department
Mismatch	Comfort Measures Date
Mismatch	Time of LDL-c laboratory test result <70

medisolv

Plan for Improvement

NEED TO DETERMINE



Safety Isn’t Optional, It’s the Future

- CMS is clearly signaling a shift: patient safety is the priority, and electronic measurement is the path forward.
- Hospital Harm eCQMs are not just new measures, they are foundational to future models like TEAM.
- Now is the time to act:
  - Validate your data
  - Strengthen your documentation
  - Engage your teams in improvement efforts
- Preparation today ensures performance tomorrow.

medisolv

Contact Us

Erin Heilman, SVP Regulatory Affairs

844-633-4765

info@medisolv.com

www.medisolv.com

12171 Clarksville Pike, #168

Clarksville, MD 21029