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The Next Era of Patient Safety

Evolving Hospital Harm eCQMs and What it Means for You

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Presenters

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.

Terri Epler, MSN RN

Solutions Consultant

Terri Epler is a healthcare technology and clinical leader with more than 13 years of experience supporting hospitals through solution consulting, workflow optimization, and predictive analytics. She combines her background in nursing and operations with deep expertise in health IT to help organizations improve performance and navigate complex quality initiatives.

Agenda

01. Understanding CMS's Shift to Safety

02. Review of Hospital Harm eCQMs

03. The eCQM Annual Process

04. Demo

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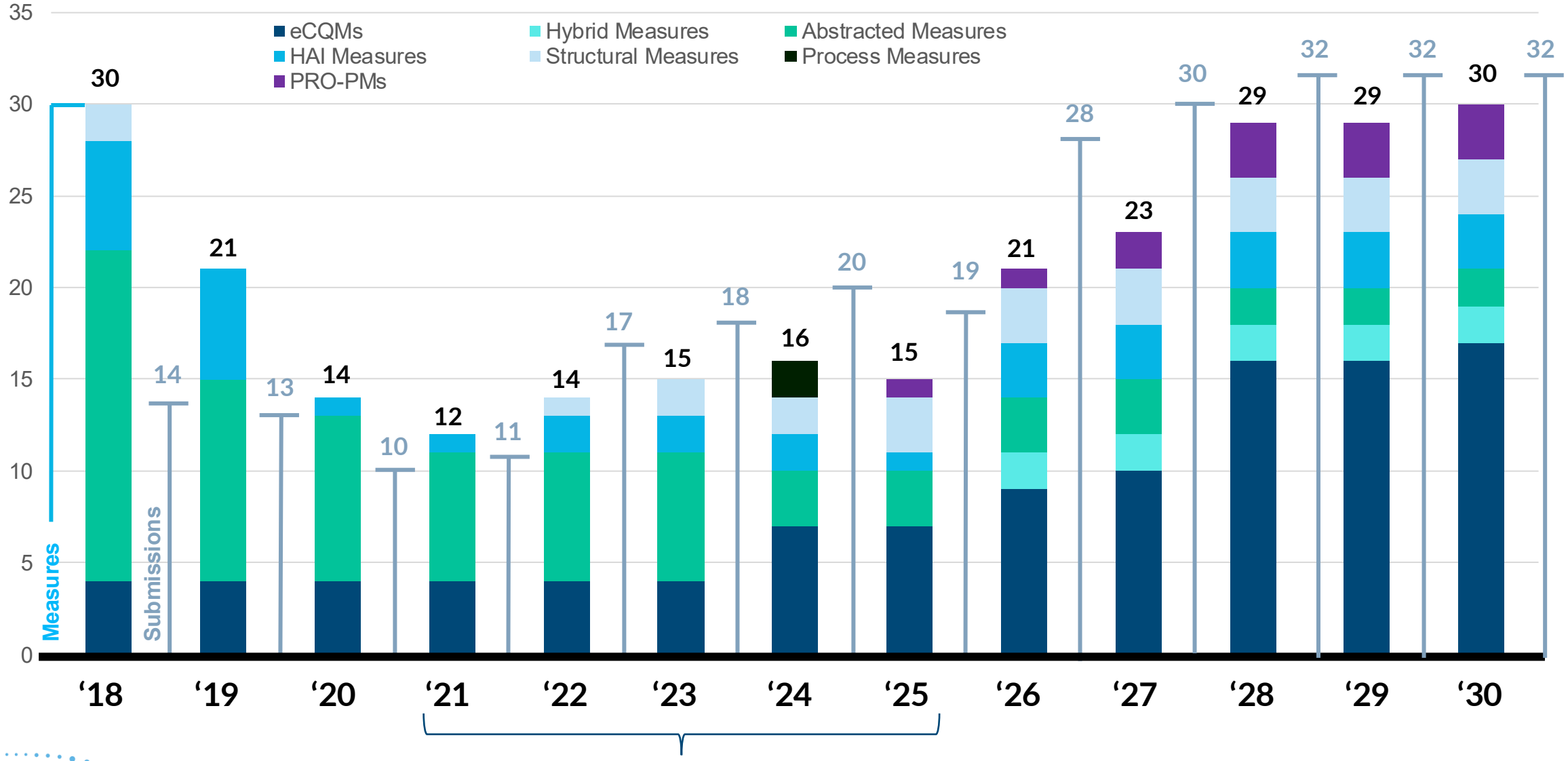
CMS IQR & OQR Programs Proposed



Current Public Reputation Reflects 2021 – 2025

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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

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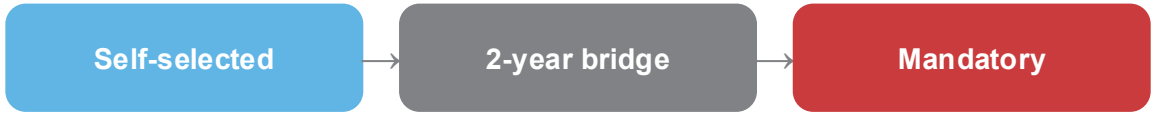
Hospital Harm eCQMs: Proposed Mandatory Reporting

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 2028
Post-op respiratory failure	Mandatory 2028
Post-op VTE	Mandatory 2030

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“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

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)

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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
HH-Acute Kidney Injury	PSI 10
HH-Post-Respiratory Failure	PSI 11
HH-Falls with Injury	PSI 08
HH - Anticoagulant-Related Major Bleeding *Under development. Not released.*	PSI 09
HH - Postoperative Venous Thromboembolism	PSI 12

Note: Every measure mandated except the one missing.

What Programs Use PSI-90

PSI-90 touches almost every public rating system. The planned shift to eCQM-based safety measurement means eCQMs will ultimately drive a hospital's public profile across all these platforms:

- Reported on Care Compare
- HACRP
- Star Rating
- Leapfrog Hospital Safety Grades
- U.S. News & World Report Hospital Rankings
- Healthgrades (use the individual components)

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Hospital Harm eCQM List

Every Hospital Harm eCQM in order from when it becomes mandatory for submission.

Measure	What it catches	Voluntary	Mandatory	Risk-adjusted
HH-Hypo Severe Hypoglycemia	Blood sugar crashes too low	—	**2026**	No
HH-Hyper Severe Hyperglycemia	Blood sugar stays too high	—	**2026**	No
HH-ORAE Opioid-Related Adverse Events	Opioid reversal with naloxone	2026	**2027**	No
HH-AKI Acute Kidney Injury	Kidney injury, stage 2+	2026	**2028**	**Yes**
HH-PI Pressure Injury	New serious pressure ulcer	2026	**2028**	No
HH-FI Falls with Injury	Fall with injury	2026	**2028***	**Yes**
HH-RF Postoperative Respiratory Failure	Can't breathe after surgery	2026	**2028***	**Yes**
HH-VTE Postoperative Venous Thromboembolism	Blood clot after surgery	2028	**2030***	**Yes**

** Proposed in the 2027 IPPS rule. Risk-adjusted measures require you to capture and transmit extra clinical variables in the QRDA file.*

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A Review of the Hospital Harm eCQMs

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Commonalities Among HH eCQMs

Every one is an inverse measure

A higher number is a worse outcome.

Pulled straight from your EHR

What your team documented, and how cleanly it's mapped, is exactly what gets scored.

Half ride on risk data you send

AKI, Falls, Respiratory Failure, and VTE only score fairly if the risk variables are captured and transmitted in the file.

The bottom line

Your safety score now lives or dies on documentation quality and clean mapping. Weak data, weak scores.

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HH-Hypo

Severe Hypoglycemia

CMS 816

MANDATORY 2026

Inverse measure

THE HARM

A patient's blood sugar crashes to a dangerous low after getting a glucose-lowering medication.

WHO'S COUNTED

Adult inpatients given at least one hypoglycemic medication.

WHERE IT SITS

Mandatory in 2026.

THE CATCH

Where capture breaks down

A severe hypoglycemic event is only counted in the numerator if a repeat blood glucose greater than 80 mg/dL isn't documented within 5 minutes of the initial severe blood draw (less than 40 mg/dL). Accurate blood-draw timestamps and discrete repeat glucose are critical. Missing or inaccurate timing can cause an inaccurate result to be counted as hospital harm.

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HH-Hyper

Severe Hyperglycemia

CMS 871

MANDATORY 2026

Inverse measure

THE HARM

A patient's blood sugar stays dangerously high across the hospital stay.

WHO'S COUNTED

Adult inpatients with diabetes, a glucose-lowering med, or any glucose over 200 mg/dL.

WHERE IT SITS

Mandatory in 2026.

THE CATCH

Where capture breaks down

A day with no documented glucose test or result can qualify as a hyperglycemic event if it is immediately preceded by two consecutive days, each with at least one glucose value greater than 200 mg/dL. Gaps in glucose documentation can result in a qualifying harm event.

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HH-ORAE

Opioid-Related Adverse Events

CMS 819

MANDATORY 2027

Inverse measure

THE HARM

A patient needs naloxone to reverse the effects of an opioid given in the hospital.

WHO'S COUNTED

Adult inpatients who received an opioid during the encounter.

WHERE IT SITS

Voluntary in 2026, then mandatory in 2027.

THE CATCH

Where capture breaks down

The numerator requires a non-enteral opioid antagonist administered within 12 hours of an opioid given outside the operating room. Accurate mapping of medication route and opioid administration location is essential for accurate results.

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HH-AKI

Acute Kidney Injury

CMS 832

MANDATORY 2028

Inverse measure | Risk-adjusted

THE HARM

A patient's kidneys are injured during the stay, reaching stage 2 or worse.

WHO'S COUNTED

Adult inpatients with a 48+ hour stay and serum creatinine drawn, excluding pregnancy.

WHERE IT SITS

Voluntary 2026 to 2027, then mandatory in 2028.

THE CATCH

Where capture breaks down

- The whole measure rides on creatinine timing and the lowest 'index' baseline value.
- Missing or inaccurate present-on-admission data can significantly impact results
- Long list of risk variables must be included in the QRDA file for accurate risk-adjustment

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HH-PI

Pressure Injury

CMS 826

MANDATORY 2028

Inverse measure

THE HARM

A patient develops a serious new pressure ulcer (stage 2+ or deep tissue) during the stay.

WHO'S COUNTED

Adult inpatients.

WHERE IT SITS

Voluntary 2026 to 2027, then mandatory in 2028.

THE CATCH

Where capture breaks down

- Present-on-admission accuracy plays a key role in accuracy of results
- If a skin assessment isn't documented discretely and early, a wound the patient arrived with gets counted as harm.

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HH-FI

Falls with Injury

CMS 1017

PROPOSED 2028

Inverse measure | Risk-adjusted

THE HARM

A patient falls in the hospital and is hurt, anywhere from a moderate injury to death.

WHO'S COUNTED

Adult inpatients with a stay under 120 days.

WHERE IT SITS

Voluntary 2026 to 2027, proposed mandatory in 2028. Also in the TEAM model in 2027.

THE CATCH

Where capture breaks down

- Patients with a fall present on admission are excluded.
- Major and moderate injuries are identified using two value sets containing more than 3,000 diagnosis codes. These diagnoses are also evaluated for present on admission indicators. If the injury was present on admission, the patient is excluded.

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HH-RF

Postoperative Respiratory Failure

CMS 1218

PROPOSED 2028

Inverse measure | Risk-adjusted

THE HARM

A patient develops postoperative respiratory failure after elective surgery and requires mechanical ventilation.

WHO'S COUNTED

Adult elective surgical inpatients without an obstetric condition.

WHERE IT SITS

Voluntary 2026 to 2027, proposed mandatory in 2028. Also in the TEAM model in 2027.

THE CATCH

Where capture breaks down

This is the most complex measure in the set. Success depends on precise documentation timing, capturing and mapping multiple new data elements, and accurately collecting new risk variables. Although the risk variables do not affect eCQM performance, they must be captured and mapped with the same level of rigor as traditional eCQM data elements.

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HH-VTE

Postoperative Venous Thromboembolism

CMS 1061

PROPOSED 2030

Inverse measure | Risk-adjusted

THE HARM

A patient develops a dangerous blood clot (DVT or PE) after surgery.

WHO'S COUNTED

Adult inpatients with at least one operating-room procedure.

WHERE IT SITS

Voluntary 2028 to 2029, proposed mandatory in 2030.

THE CATCH

Where capture breaks down

The VTE counts if it occurs during the surgical encounter or within 30 days of surgery. This is the first time an eCQM is evaluating a subsequent encounter. Patients that return to the hospital within 30 days of the first surgery, with a VTE diagnosis and VTE medication present during that subsequent encounter, are considered for the numerator. Additionally, correct implementation of many new data elements, present on admission documentation, location mapping and timing will be key to accurate results.

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Getting Started (or Restarted!) with eCQMs

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The Core eCQM Process

SUPPORTING ACTIVITIES

Educate
Rule analysis, spec updates, value set & code changes

Discover
Requirements identification, gap analysis, impact analysis

Build & Map
Technical architecture, data flows, update mapped codes, implementation

Validate
Verify measure populations & confirm data accuracy & completeness

Optimize
Improve processes, address feedback, enhance performance

Submit
Submit QRDA I files to regulatory bodies

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Educate, Discover, Build & Map

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eCQM Management Team

Cross-Functional Ownership

- Representatives from both the IT and Quality teams must be involved
- Collaborate on data management processes
- Determine ownership
- Manage eCQM data capture, accuracy, completeness, mapping, storage, and QRDA file components

Measurement & Regulatory Lead Quality	**Technical Lead** IT Team	**Clinical Process Leader** Clinicians
• Measures • Education • Agencies • Requirements	• Application maintenance • Mapping • Build • Change control / management	• Electronic documentation • Critical feedback

eCQM Implementation/Update Phase

Education

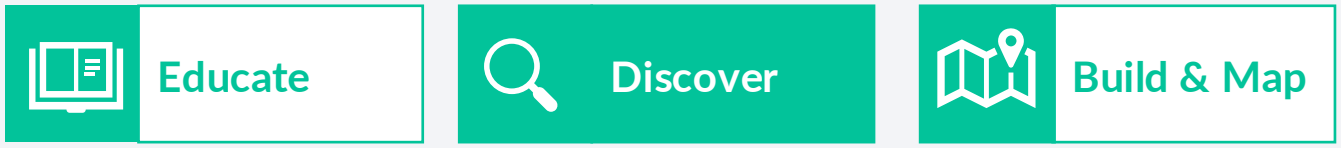
- Educate team members. Make sure all stakeholders understand the basics of eCQMs, the significance of failing an audit, and are committed to your data management goals.
- Identify and share resources

eCQM Implementation/Update Phase

Data Management is Key!

Good data management defines the organization and handling rules of your 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 Implementation/Update Phase

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

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Educate

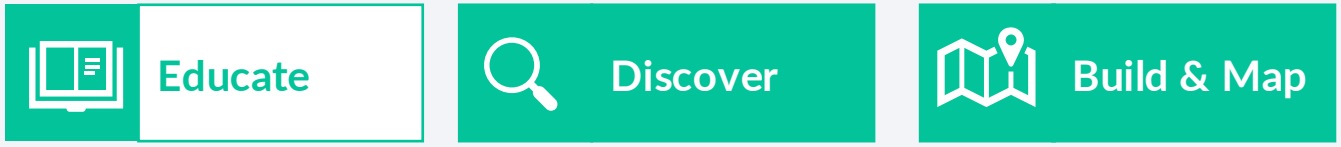
Discover

Build & Map

eCQM Implementation/Update Phase

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



Example Data Audit for CMS 506

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				

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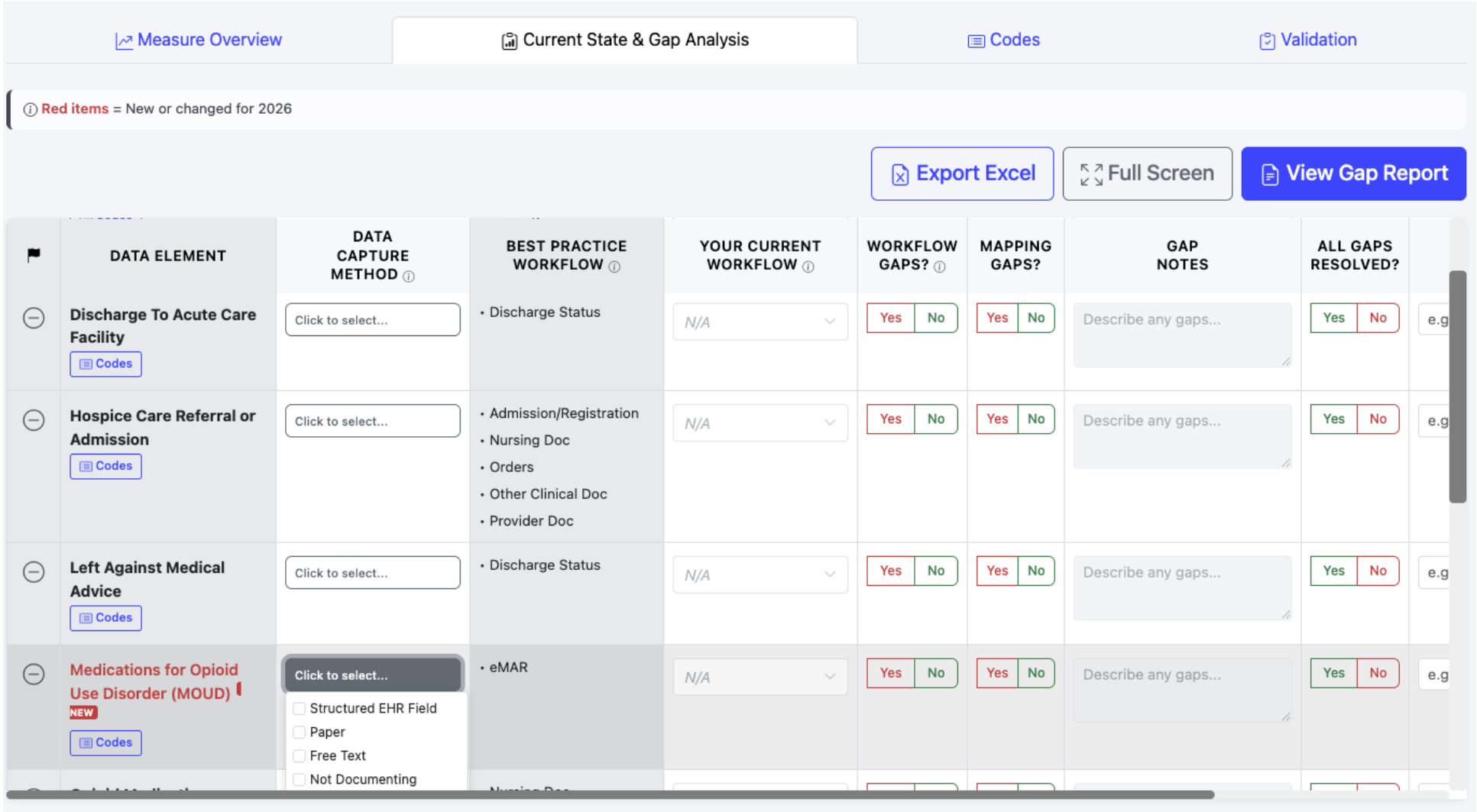
eCQM Readiness Playbook: CMS 506 Example

For Medisolv Quality Academy Members



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Validate, Optimize, Submit

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eCQM Validation

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 (audit) selection timing

Understanding Fallouts

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Validate | Optimize | Submit

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
Origina	Validat	Original Outcome - Denominator Exclusion	Validated Outcome - Denominator Exclusion	Original Outcome - Numerator	Validated Outcome - Numerator	Origina	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
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Met	Met	Excluded	Excluded	Not Met	Not Met			Match
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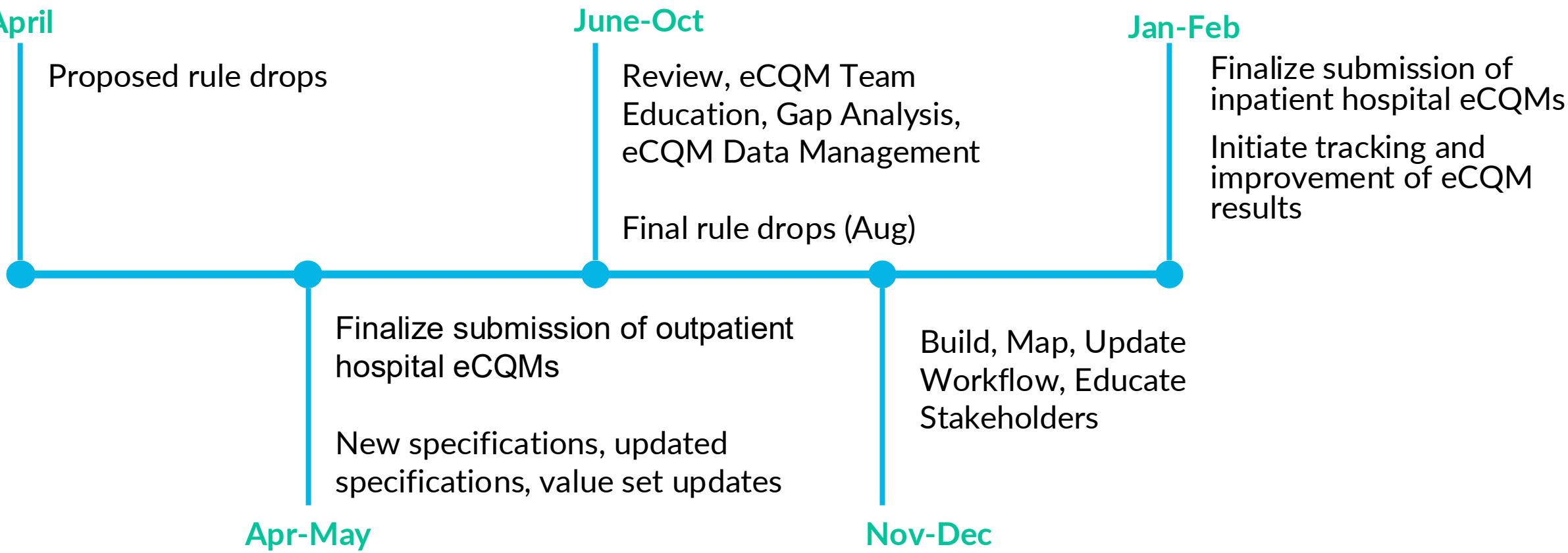
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match
Met	Met	Excluded	Excluded	Not Met	Not Met			Match

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

Annual eCQM Cycle



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Validate | Optimize | Submit

Do Not Underestimate The Effort

Ongoing quality-reporting operations — for a typical health-system quality team (Quality Director, Clinical/Quality Analyst, IT Analyst, Performance Improvement Manager)

Activity	Annual hours	What it covers
Measure & program changes	~800 hrs/year	Tracking CMS spec & program changes, regulatory monitoring, staff education
Submissions	~680 hrs/year	Preparing and submitting measure data to CMS
Performance management	~410 hrs/year	Monitoring measure results and driving improvement
Subtotal	~1,890 hrs/year	Roughly one full-time equivalent of effort

eCQM-specific effort (per electronic clinical quality measure)

Activity	Time	What it covers
eCQM implementation	~80 hrs per measure (one-time)	Initial build, mapping, and validation when a measure is adopted
eCQM annual maintenance	~40 hrs per measure / year	Re-validating data and updating EHR configuration each time CMS revises the spec (≈25 hrs clinical/quality + 15 hrs IT) — recurs every year and scales with the number of measures

Sources:

- *Sage Research survey of health quality professionals (2024)* — health-system level, non-Medisolv respondents (n = 93).
- *Saraswathula A, et al. "The Volume and Cost of Quality Metric Reporting." JAMA. 2023;329(21):1840–1847. doi:10.1001/jama.2023.7271*

Solution Demo

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MARK YOUR CALENDAR

Save the dates.

Two dates to hold for your team — one expert session this summer, and our flagship conference in December.

December.

QUALITY INNOVATION SPOTLIGHT

Preparing for the Information Transfer PRO-PM

DATE
July 28

TIME
12:00 PM ET

FLAGSHIP CONFERENCE
CONFERENCE

The 2026 HERE Conference

Three days of regulatory education, best practices, and hands-on planning to get your to get your organization ready for the 2027 reporting year.

WHEN
December 1–3, 2026

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