CBE ID

3316e

Title

Safe Use of Opioids – Concurrent Prescribing

Project

Primary Prevention

Endorsement Status

Endorsed with Conditions

E&M Committee Rationale/Justification

- Expand reliability and validity testing beyond the sample used in current submission to ensure a more diverse population and explore regional diversity within testing.
- Explore new versus current users of opioids and benzodiazepines on admission, and if feasible, stratify the data by these populations.

Is Under Review

No

Next Maintenance Cycle

Fall 2028

Previous Endorsement Cycle

Fall 2023

Initial Endorsement

Wed, 05/16/2018 - 14:16

Steward

Centers for Medicare & Medicaid Services

1.0 New or Maintenance

Maintenance

1.3 Electronic Clinical Quality Measure (eCQM)

Yes

1.6 Measure Description

Proportion of inpatient hospitalizations for patients 18 years of age and older prescribed, or continued on, two or more opioids or an opioid and benzodiazepine concurrently at discharge.

1.7 Composite Measure

No

1.7 Measure Type

Process

1.8 Level of Analysis

Facility

1.9 Care Setting

Hospital: Inpatient

1.10 Measure Rationale

Not Applicable.

1.11 Measure Webpage

https://ecqi.healthit.gov/sites/default/files/ecqm/measures/CMS506v5.html#d1e879

1.12a Attach MADiE Output

CMS506v6 MAT Output.zip

1.13 Data Dictionary

Attached

1.13a Attach Data Dictionary

Safe Use Value Sets.zip

1.14 Numerator

Inpatient hospitalizations where the patient is prescribed or continuing to take two or more opioids or an opioid and benzodiazepine at discharge.

1.14a Numerator Details

The numerator consists of encounters of patients prescribed two or more opioids OR an opioid and benzodiazepine at discharge.

Presence of two or more opioids at discharge Value Sets:

- Medication, Active: Schedule II and Schedule III Opioids (OID: 2.16.840.1.113762.1.4.1111.165)
- Medication, Discharge: Schedule IV Opioids (OIDs: 2.16.840.1.113883.3.3157.1004.14, 2.16.840.1.113883.3.3157.1004.16, or 2.16.840.1.113883.3.3157.1004.18)

OR

Presence of an opioid and a benzodiazepine prescription at discharge Value Sets:

- Medication, Active: Schedule II and Schedule III Opioids (OID: 2.16.840.1.113762.1.4.1111.165)
- Medication, Discharge: Schedule IV Opioids (OIDs: 2.16.840.1.113883.3.3157.1004.14, 2.16.840.1.113883.3.3157.1004.16, or 2.16.840.1.113883.3.3157.1004.18)
- Medication, Active: Benzodiazepines (OID: 2.16.840.1.113762.1.4.1125.1)

To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at https://vsac.nlm.nih.gov/.

1.15 Denominator

Initial population inpatient hospitalizations (inpatient stay less than or equal to 120 days) that end during the measurement period, where the patient is 18 years of age and older at the start of the encounter and prescribed one or more new or continuing opioid or benzodiazepines at discharge.

1.15a Denominator Details

The denominator consists of *Inpatient Encounters with an Opioid or Benzodiazepine at Discharge*.

Inpatient Encounters:

Encounter, Performed: Encounter Inpatient (OID: 2.16.840.1.113883.3.666.5.307).

Patients with an opioid or a benzodiazepine active on admission and continued at discharge:

- Medication, Active: Schedule II, Schedule III (OID: 2.16.840.1.113762.1.4.1111.165)
- Medication, Active: Schedule IV Opioids (OID: 2.16.840.1.113883.3.3157.1004.14, 2.16.840.1.113883.3.3157.1004.16, or 2.16.840.1.113883.3.3157.1004.18)
- Medication, Active: Schedule IV Benzodiazepines (OID: 2.16.840.1.113762.1.4.1125.1)

To access the value sets for the measure, please visit the Value Set Authority Center, sponsored by the National Library of Medicine, at https://vsac.nlm.nih.gov/.

1.15b Denominator Exclusions

The following encounters are excluded from the denominator:

1. Encounters for patients with an active diagnosis of cancer that begins prior to or during the encounter
2. Encounters for patients who are ordered or are receiving palliative or hospice care (including comfort measures, terminal care, and dying care) during the encounter
3. Encounters for patients who are discharged to another inpatient care facility

4. Encounters for patients discharged against medical advice (AMA)
5. Encounters for patients who expire during the encounter
6. Encounters for patients with an active diagnosis of sickle cell disease or sickle cell disease with crisis that begins prior to or during the encounter
7. Encounters for patients with an active diagnosis of Opioid Use Disorder or are receiving Medications for Opioid Use Disorder that begins prior to or during the encounter

1.15c Denominator Exclusions Details

Denominator exclusions are represented using the QDM datatype and following value sets:

1. Encounters for patients who are ordered or are receiving palliative or hospice care (including comfort measures, terminal care, and dying care) during the encounter
    - Intervention, Performed: Palliative care (OID: 2.16.840.1.113883.3.600.1.1579)
    - Intervention, Order: Palliative care (OID: 2.16.840.1.113883.3.600.1.1579).
2. Encounters for patients who are discharged to another inpatient care facility
    - Discharge to acute care facility (OID: 2.16.840.1.113883.3.117.1.7.1.87)
3. Encounters for patients discharged against medical advice (AMA)
    - Discharge against medical advice (AMA) (OID: 2.16.840.1.113883.3.117.1.7.1.308)
4. Encounters for patients who expire during the encounter
    - Expiration during hospital stay (OID: 2.16.840.1.113883.3.117.1.7.1.309)
5. Encounters for patients with an active diagnosis of sickle cell disease or sickle cell disease with crisis that begins prior to or during the encounter
    - Diagnosis: Sickle Cell Disease: (OID: 2.16.840.1.113883.3.3157.1004.22)
    - Diagnosis: Sickle Cell Disease with crisis: (OID: 2.16.840.1.113762.1.4.1029.355)
6. Encounters for patients with an active diagnosis of Opioid Use Disorder or are receiving Medications for Opioid Use Disorder that begins prior to or during the encounter
    - Diagnosis (OIDs: 2.16.840.1.113762.1.4.1146.1109, 2.16.840.1.113762.1.4.1146.1110)
    - Receiving medications for Medically assisted Treatment (MAT) (OID: 2.16.840.1.113762.1.4.1046.54)
7. Encounters for patients with an active diagnosis of cancer that begins prior to or during the encounter.
    - Diagnosis: Cancer (OID: 2.16.840.1.113762.1.4.1111.161),

1.16 Type of Score

Rate/proportion

1.17 Measure Score Interpretation

Better performance = Lower score

1.18 Calculation of Measure Score

Please see "2023 CBE Flow" diagram attached.

1.18a Attach measure score calculation diagram

2023 CBE Flow.png

1.19 Measure Stratification Details

Not Applicable. This measure is not stratified.

1.20 Types of Data Sources

Electronic Health Records

1.25 Data Source Details

No additional tools are used for data collection for eCQMs. Hospitals collect EHR data using certified electronic health record technology (CEHRT). The human readable and XML artifacts of the Health Quality Measures Format (HQMF) of the measure are contained in the eCQM specifications. No additional tools are used for data collection for eCQMs.

1.26 Minimum Sample Size

Not applicable; this measure does not use a sample.

2.1 Attach Logic Model

3316e Logic Model_0.pdf

2.2 Evidence of Measure Importance

In 2022, the CDC published a guideline, *The CDC Clinical Practice Guideline for Prescribing Opioids for Pain*, updating the previous version of its guideline published in 2016, on the effectiveness and risks of long-term opioid treatment of chronic pain with more recent publications. Based on CDC's GRADE criteria, the overall quality of the clinical evidence base for the effectiveness and risks of long-term opioid therapy (five systematic reviews). A "dose-dependent association" between opioid use and risk for overdose events, including death, was found consistently across two studies in the clinical evidence review and several epidemiologic studies in the contextual evidence review. Co-prescription of opioids with benzodiazepines was also found to increase risk for potentially fatal overdose in three studies included in the contextual evidence review. The studies found evidence of concurrent benzodiazepine use in 31 to 61 percent of those deceased from overdose. This guideline was published in 2022 and references the most recent systematic reviews. We are not aware of additional systematic reviews that have emerged since it was completed.

The CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022

The guideline recommends that clinicians should:

- "[Use strategies minimizing] opioid use…for both opioid-naïve and opioid-tolerant patients

with acute pain when possible. If patients receiving long-term opioid therapy require additional medication for acute pain, nonopioid medications should be used when possible."
- "Use particular caution when prescribing opioid pain medication and benzodiazepines concurrently."
- "Review increased risks for respiratory depression when opioids are taken with benzodiazepines, other sedatives, alcohol, nonprescribed or illicit drugs (e.g., heroin), or other opioids (see Recommendations 8 and 11)"
- "Closely monitor patients who are unable to taper and who continue on high-dose or otherwise high-risk opioid regimens (e.g., opioids prescribed concurrently with benzodiazepines) and should work with patients to mitigate overdose risk (e.g., by providing overdose education and naloxone) (see Recommendation 8)."
- "Discuss information from the PDMP with the patient and confirm that the patient is aware of any additional prescriptions."
- "Discuss safety concerns, including increased risk for respiratory depression and overdose, with patients found to be receiving overlapping prescription opioids from multiple clinicians who are not coordinating the patient's care or patients who are receiving medications that increase risk when combined with opioids (e.g., benzodiazepines) (see Recommendation 11), and offer naloxone (see Recommendation 8).
- "Discuss safety concerns with other clinicians who are prescribing controlled substances for the patient. Ideally, clinicians should first discuss concerns with the patient and inform them that they plan to coordinate care with their other clinicians to improve the patient's safety."
"

In addition to the 2022 CDC Clinical Practice Guideline for Prescribing Opioids for Pain, opioid prescribing guidelines issued by various state agencies and professional societies for various settings agree with the recommendation to avoid concurrently prescribing opioids (American Academy of Emergency Medicine and Washington Agency Medical Directors' Group (WAMDG)), and opioids and benzodiazepines (WAMDG, American Society of Interventional Pain Physicians, and New York City Department Of Health and Mental Hygiene) whenever possible as the combination of these medications may potentiate opioid-induced respiratory depression.

Citation:

- Deborah Dowell, MD1; Kathleen R. Ragan, MSPH; Christopher M. Jones, PharmD, DrPH; Grant T. Baldwin, PhD; Roger Chou, MD CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2022, Recommendation 11 Published November 4, 2022
- Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R. CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022. MMWR Recomm Rep 2022;71(No. RR-3):1–95. DOI: http://dx.doi.org/10.15585/mmwr.rr7103a1.

Table 1. Performance Scores by Decile

Performance Gap

	Overall	Minimum	Decile_1	Decile_2	Decile_3	Decile_4	Decile_5	Decile_6	Decile_7	Decile_8	Decile_9	Decile_10	Maximum
Mean Performance Score	17.02	14.00	15.00	15.06	15.70	15.78	16.24	16.67	16.99	17.28	20.59	23.92	23.92
N of Entities	11	1	1	1	1	1	1	1	1	1	1	1	1

	Overall	Minimum	Decile_1	Decile_2	Decile_3	Decile_4	Decile_5	Decile_6	Decile_7	Decile_8	Decile_9	Decile_10	Maximum
N of Persons / Encounters / Episodes	18084	4230	20	2371	446	545	1699	330	2290	324	5482	347	347

2.6 Meaningfulness to Target Population

We interviewed 12 providers for their feedback on the measure. Some providers indicated that it will be useful to have data on sub-group prescribing practices to provide population-based evidence-based care to look for large discrepancies.

3.1 Contributions Towards Closing Care Gaps

This question was optional on the measure submission form template therefore we did not conduct this testing.

4.1 Feasibility Assessment

This submission was drafted prior to this field being created. Not Applicable.

4.2 Attach Feasibility Scorecard

3316e-Feasibility Scorecard-All Sites_0.xlsx

4.3 Feasibility Informed Final Measure

Not Applicable. This measure is already fully specified therefore the Feasibility assessment during this round of testing did not influence the final measure specification. As evidence of the measure's feasibility, there were 4,368 hospitals nation-wide that report this measure and have available measure data on the Timely and Effective Care hospital-level file on Care Compare.

4.4 Proprietary Information

Not a proprietary measure and no proprietary components

4.4a Fees, Licensing, or Other Requirements

Value sets are housed in the Value Set Authority Center (VSAC), which is provided by the National Library of Medicine (NLM), in coordination with the Office of the National Coordinator for Health Information Technology and the Centers for Medicare & Medicaid Services.

Viewing or downloading value sets requires a free Unified Medical Language System® (UMLS) Metathesaurus License, due to usage restrictions on some of the codes included in the value sets. Individuals interested in accessing value set content can request a UMLS license at (https://uts.nlm.nih.gov/license.html).
There are no other fees or licensing requirements to use this measure, which is in the public domain.

5.1.1 Data Used for Testing

One large health system, representing ten hospitals total and one single hospital, in two states (MN and WI) field tested the measure from 2021-2022. All eleven hospitals are located in urban areas and are not-for-profit teaching hospitals. The hospitals varied in EHR systems (Cerner and Epic). The test sample from each health system included at least 25,504 encounters.

5.1.2 Differences in Data

There are no differences in the data used for different aspects of testing.

5.1.3 Characteristics of Measured Entities

Table 1. Testing Site Characteristics

Site	Site Type	State	Number of Hospitals	EHR System
Site 1	Hospital System	MN	10	Epic
Site 2	Hospital	WI	1	Cerner

5.1.4 Characteristics of Units of the Eligible Population

Table 4 shows the characteristics of the 18,084 patients in our 11-hospital sample.

Table 4. Measure performance stratified by sex, race, ethnicity, and payer (N= 18,084)

Category	Count	Percent
Sex	-	-
Female	13425	64.18%
Male	7493	35.82%
Unknown sex	1	0%
Race	-	-
American Indian or Alaska Native	265	1.27%
Asian	1001	4.79%
Black or African American	1669	7.98%
Native Hawaiian or Other Pacific Islander	36	0.17%
Other Race	12	0.06%
Unknown race	838	4.01%
White	17098	81.73%
Ethnicity	-	-
Hispanic or Latino	408	1.95%
Not Hispanic or Latino	16345	78.13%
Unknown ethnicity	4166	19.91%
Payer	-	-

Medicaid 3541 17.05%
Medicare 9473 45.6%
Other 400 1.93%
Private Insurance 7349 35.38%
Self-Pay or Uninsured 10 0.05%

5.2.1 Level(s) of Reliability Testing Conducted

Accountable entity level (i.e., measure score) (e.g., signal-to-noise analysis)

5.2.2 Method(s) of Reliability Testing

Signal-to-Noise ratio tests the precision of scores across providers. To assess signal-to-noise reliability of the hospital level measure score, we utilized the beta-binomial model as described by in "The Reliability of Provider Profiling" (Adams, 2009). The distribution of reliability estimates across all facilities was examined. A reliability estimate of 0.7 has been used to define good reliability and the threshold at which meaningful differences in performance can be detected.

Reference:

Adams, John L. "The Reliability of Provider Profiling: A Tutorial." Santa Monica, CA: RAND Corporation, 2009

5.2.3 Reliability Testing Results

The mean reliability across 11 hospitals was 0.79 (95% CI: 0.41, 0.97) and median reliability of 0.82.

Table 5. Signal to Noise calculations across hospital

year	Number of hospitals	Mean	min	p5	p10	p25	Median	p75	p90	p95	IQR	Maximum	SD
06/2021-06/2022	11	0.79	0.14	0.41	0.68	0.72	0.82	0.95	0.97	0.97	0.23	0.98	0.24

5.2.4 Interpretation of Reliability Results

This result indicates that the hospital-level performance rate has strong reliability, meaning that

differences in hospital performance reflect true differences in quality as opposed to measurement error or noise. A reliability of 0.7 or above reflects strong precision (or reliability) in performance scores.

Table 2. Accountable Entity Level Reliability Testing Results by Denominator, Target Population Size

Accountable Entity-Level Reliability Testing Results

	Overall	Minimum	Decile_1	Decile_2	Decile_3	Decile_4	Decile_5	Decile_6	Decile_7	Decile_8	Decile_9	Decile_10	Maximum
Reliability	0.790.14	0.41	0.41	0.71	0.72	0.79	0.82	0.93	0.95	0.95	0.97	0.97	0.97
Mean Performance Score	11	1	2	1	1	1	1	1	1	1	1	1	1
N of Entities	18084	20	367	324	330	446	545	1699	2290	2371	5482	4230	4230

5.3.1 Level(s) of Validity Testing Conducted

Person or encounter level (i.e., data element) (e.g., sensitivity and specificity), Accountable entity level (i.e., measure score) (e.g., criterion validity)

5.3.3 Method(s) of Validity Testing

Data Element Validity

Data element validity is established by comparing the data obtained directly from EHR with the same data obtained from a different source, such as patients' charts. To assess data element validity, we randomly selected a 25 patient encounters from the full EHR extract in each test site. For selected cases, site personnel manually abstract data elements necessary for the measure calculation from each site's EHR. We then compared the manually abstracted and electronically extracted data to assess data element validity via agreement between the gold-standard source (manual abstraction) and the EHR extract.

We then calculated the raw agreement (percentage agreement) and the chance-corrected agreement (Gwet's AC1) between the two data sources. The interpretation of the AC1 statistic is the same as that of Cohen's Kappa, but AC1 is a more robust measure of interrater reliability. Kappa is sensitive to classification probabilities which in some cases lead to the low chance-corrected agreement despite the high observed agreement (the so-called Kappa paradox). This situation does not occur when using AC1. Higher values for agreement statistics demonstrate that the structured EHR data used to calculate the measure have accuracy similar to looking at the medical record overall, including clinical notes, documents, and other fields that convey information about the patient but cannot be used to calculate eCQMs. When the two measurements agree perfectly, the value of the agreement will be 1.0.

Empiric Validity

We examined validity of the measure using a hypothesis-driven validity testing approach. Under this approach, a measure is considered valid if the measure score discriminates between subgroups of patients expected to have differences in the measure rates based on findings from the literature. We evaluated differences in mean measure scores among predefined groups of patients based on the evidence. For example, consistent with the literature, Medicare patients were expected to have higher rates of concurrent opioid prescribing than non-Medicare patients (Li, 2018).

To test for the differences in the measure rates by patient subgroups, t-tests were used to compare mean group differences. We also computed Cohen's d effect size to account for small differences that are statistically significant may not always be practically or clinically meaningful. Effect size values for dichotomous variables were defined as small (0.2), medium (0.5), or large (0.8) (Cohen, 1988). For the Payer variable, analysis of variances (ANOVA) was used to test the overall differences in the measure rates between groups. We then computed Eta-squared to determine effect size for the overall difference between groups. Effect size values were categorized as small (0.01), medium (0.06), or large (0.14).

References:

Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Li, J., Bell, T., Chollet, D. (2018). Patterns of Opioid Prescribing in Minnesota: 2012 and 2015. Minnesota Department of Health, Mathematica Policy Research.

Exclusions Analysis

To examine the effect of these exclusions, the number of patients with each exclusion was examined and we then computed measure rates with and without each exclusion.

Missing Data

Overall, missing data are not a threat to validity for the measure. For example, if data are missing from medication fields (for example, medication name), we interpret this to mean that the patient was not prescribed any medication at discharge, not that the patient was prescribed medication at discharge and this information is missing. Encounter type and discharge date are required for the measure calculation to assess medications that are active at discharge in the inpatient setting and ED/observation. Date of birth is also required, as it applies for patients ages 18 years and older. Rates of missing data on these items were negligible. We did not assess the frequency of missing

data because we did not find any significant issues in the extracted or abstracted data.

5.3.4 Validity Testing Results

Data Element Validity
We measured percent agreement, defined as the number of patients for whom both data sources, electronically and manually abstracted EHR data, agree on the presence or absence of a condition for a sample of 50 randomly selected patients charts. We also used Gwet's AC1 statistic to adjust percent agreement to account for chance agreement. The Kappa score can range from -1.00 to 1.00. We found high levels of percent agreement between the electronically and manually abstracted data for the denominator, denominator exclusions, and numerator.

The Kappa values calculated through data element validity testing suggest high levels of agreement between the data extract generated from the EHR systems and the manually abstracted data. The overall sample showed 88 percent agreement or higher for all data elements. In addition, agreement was almost perfect for two of the exclusionary data elements (palliative care and cancer).

Table 6. Agreement statistics for random sample data between EHR extraction and manual chart abstraction (n = 50)
Data Element Measure Part N Percent Agreement Gwet AC1
Opioid(s) at discharge Numerator, denominator 50 88 0.86
Benzodiazepine(s) at discharge Numerator, denominator 50 100 1
Discharge Disposition N/A 50 100 1
Admission date/time N/A 50 96 0.96
Discharge date/time N/A 50 96 0.96
Principal diagnosis N/A 50 100 1
Cancer Diagnosis Denominator exclusion 50 88 0.86
Palliative Hos. Denominator exclusion 50 90 0.89
Sickle Diagnosis Denominator exclusion 50 100 1
Sickle Crisis Diagnosis Denominator exclusion 50 100 1
OUD Diagnosis (ICD) Denominator exclusion 50 96 0.96
Prim. Payer N/A 50 90 0.89
Age N/A 50 98 0.98
Sex N/A 50 100 1
Race N/A 50 100 1
Ethnicity N/A 50 100 1

Empiric Validity

As noted above, we hypothesized that Medicare patients would have higher rates of concurrent

opioid prescribing than non-Medicare patients. We observed meaningful differences in the measure rates across all sex, race, ethnicity, payer, and age. The Cohen's D value for sex, race, ethnicity, and age indicated a small effect while the Cohen's D for payer indicated a large effect. Female patients had lower performance rates than male patients, White patients had poorer performance rates compared to patients of other races, and non-Hispanic patients had worse performance rates than Hispanic or Latino patients. Medicare and Medicaid patients had poorer performance rates compared to patients with other types of insurance. We examined performed a t-test to determine differences between groups. There was no significant difference between performance rates by patients' sex, race, or ethnicity. Differences among Medicare vs. non-Medicare beneficiaries were statistically significant.

Consistent with the literature, we observed higher measure rates (lower performance) for Medicare patients. The differences in means by were close to the definition of medium effect (0.50). We also observed that age was statistically significant which aligns without payer findings given that the Medicare population is made up primarily of beneficiaries 65+.

Table 7. hypothesis-driven validity testing results

Category	Value	Group 1 Mean	Group 2 Mean	Mean difference	t-statistic	P value	Cohens d
Sex	Female vs. male	0.16	0.19	-0.03	-1.67	0.11	0.71
Race	Black vs white	0.14	0.18	-0.04	-1.19	0.26	0.51
Ethnicity	Hispanic/Latino vs. Not Hispanic/Latino	0.12	0.18	-0.06	-1.95	0.08	0.89
Insurance Type/Payer	Medicare vs. non-Medicare	0.22	0.13	0.09	5.56	<0.01	2.37
Age	18-64 vs. 65 and over	0.14	0.21	-0.06	-4.03	<0.01	1.72

Exclusions Analysis

Performance rates vary little regardless of applying the denominator exclusions across sites. When comparing the as specified measure with the excluded populations remove to the measure when no patients are excluded the performance rate increases from 17.12 (measure as specified) to 23.36 percent. Exclusion rates range from 19.38 to 23.32 percent. This suggests that it is unlikely that the exclusions will put any specific test site at an advantage or disadvantage.

Table 8. Patients excluded from the Initial Population and Performance Rate Without Specific Denominator Exclusions

Exclusions	Count of patients in Initial Population	Percent of patients in Initial Population	Performance Score
As currently specified (including all exclusion criteria)	-	-	17.12%
No Exclusions	-	-	23.36%
Cancer exclusion only	5797	22.73%	19.83%
Palliative care exclusion only	1702	6.67%	20.62%
Hospice exclusion only	925	3.63%	21.31%
Discharge to another inpatient facility exclusion only	283	1.11%	23.28%
Expire during stay exclusion only	149	0.58%	23.32%
Sickle Cell Anemia Exclusion only	174	0.68%	23.23%

Left against Medical Advice Only 74 0.29% 23.31%
OUD/MOUD exclusion only 308 1.21% 22.88%

5.3.5 Interpretation of Validity Results

Data Element Validity

Table 6. Agreement statistics for random sample data between EHR extraction and manual chart abstraction (n = 50)
Data Element Measure Part N Percent Agreement Gwet AC1
Opioid(s) at discharge Numerator, denominator 50 88 0.86
Benzodiazepine(s) at discharge Numerator, denominator 50 100 1
Discharge Disposition N/A 50 100 1
Admission date/time N/A 50 96 0.96
Discharge date/time N/A 50 96 0.96
Principal diagnosis N/A 50 100 1
Cancer Diagnosis Denominator exclusion 50 88 0.86
Palliative Hos. Denominator exclusion 50 90 0.89
Sickle Diagnosis Denominator exclusion 50 100 1
Sickle Crisis Diagnosis Denominator exclusion 50 100 1
OUD Diagnosis (ICD) Denominator exclusion 50 96 0.96
Prim. Payer N/A 50 90 0.89
Age N/A 50 98 0.98
Sex N/A 50 100 1
Race N/A 50 100 1
Ethnicity N/A 50 100 1

Empiric Validity

Table 7. hypothesis-driven validity testing results
Category Value Group 1 Mean Group 2 Mean Mean difference t-statistic P value Cohens d
Sex Female vs. male 0.16 0.19 -0.03 -1.67 0.11 0.71
Race Black vs white 0.14 0.18 -0.04 -1.19 0.26 0.51
Ethnicity Hispanic/Latino vs. Not Hispanic/Latino 0.12 0.18 -0.06 -1.95 0.08 0.89
Insurance Type/Payer Medicare vs. non-Medicare 0.22 0.13 0.09 5.56 <0.01 2.37
Age 18-64 vs. 65 and over 0.14 0.21 -0.06 -4.03 <0.01 1.72

Exclusions Analysis

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Sickle Cell Anemia Exclusion only	174	0.68%	23.23%
Left against Medical Advice Only	74	0.29%	23.31%
OUD/MOUD exclusion only	308	1.21%	22.88%

5.3.2 Type of Accountable Entity Level Validity Testing Conducted (derived)

Empirical validity testing at the accountable entity-level (e.g., criterion validity, construct validity, known groups analysis)

5.4.1 Methods Used to Address Risk Factors

No risk adjustment or stratification

5.4.1b Rationale For No Adjustment or Stratification

Not applicable. This is not an outcome or resource use measure.

6.1.3 Current Use(s)

Payment Program, Regulatory and Accreditation Programs, Quality Improvement (Internal to the specific organization)

6.1.3 Program Details

Name of the program and sponsor
Hospital Inpatient Quality Reporting Program, sponsored by Centers for Medicare & Medicaid Services
URL of the program
https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/in...
Purpose of the program
The Hospital Inpatient Quality Reporting (IQR) Program is a pay for quality data reporting program implemented by CMS for inpatient hospital services. In addition to providing hospitals with a financial incentive to report their quality-of-care measure da
Geographic area and percentage of accountable entities and patients included
The publicly reported values (on Care Compare) are calculated for facilities nationwide in the United States that meet minimum case count requirements (> 10 cases). There were 4,368 hospitals nation-wide with available measure data.

Applicable level of analysis and care setting

Acute care hospital facility level

6.2.1 Actions of Measured Entities to Improve Performance

Based on provider interviews, data from this measure can be used to establish a baseline of prescribing practices. To improve scores, providers can monitor specific patients as well as encourage alerts for concurrent naloxone prescribing. Outreach to the community to understand these prescribing practices could take place at the hospital level.

6.2.2 Feedback on Measure Performance

CMS regularly receives feedback and questions from hospital abstractors about specifications and data collection through Jira, from educational webinars, testing sites, and interviews with abstractors. The measure developer and CMS take this feedback into consideration during the manual revision cycles where the team reviews the specifications to identify ways to clarify and simplify abstraction guidance and decrease data collection and clinical documentation burden.

In 2022, this measure was available for voluntary reporting and 2023 is the first year of required reporting. Since measure was only required for one year, user feedback is not available. Questions received have been focused on specification clarifications.

6.2.3 Consideration of Measure Feedback

The measure development team monitored emerging literature on the measure concept, conducted harmonization reviews of other opioid measures to minimize reporting burden, and solicited input from stakeholders. Based on our findings, the measure now includes: (1) excluding patients who leave the hospital Against Medical Advice (AMA), (2) excluding patients with Sickle Cell Disease (SCD) from the denominator, and (3) including Schedule IV opioids within the scope of the measure.

Excluding patients who leave against medical advice (AMA). Stakeholders raised the idea that clinicians should not be held responsible for reconciling medications for patients who leave the hospital AMA.

Excluding patients with Sickle Cell Disease (SCD). The primary benefit of excluding patients with SCD is to more closely align with the Centers for Disease Control and Prevention's recommendations in its 2022 Guideline for Prescribing Opioids for Chronic Pain.[1] Excluding these patients also improves harmonization with three claims-based, health-plan-level measures stewarded by the Pharmacy Quality Alliance: Use of Opioids at High Dosage in Persons Without Cancer, Use of Opioids from Multiple Providers in Persons Without Cancer, and Use of Opioids from Multiple Providers and at High Dosage in Persons Without Cancer. During the change review process of the 2022 Annual Update, stakeholders said excluding patients with SCD would not

increase the reporting burden.

Including Schedule IV opioids in the measure medications. Including Schedule IV opioids in the measure would better harmonizes the Safe Use of Opioids measure with other opioid measures, including the VA Opioid Safety Initiative and the three Pharmacy Quality Alliance opioid measures.

1. Centers for Disease Control and Prevention. “CDC Advises Against Misapplication of the Guideline for Prescribing Opioids for Chronic Pain.” April 2019. Available at http://cdc.gov/media/releases/2019/s0424-advises-misapplication-guideli…. Accessed October 11, 2019.

6.2.4 Progress on Improvement

This measure was only required for one year therefore data regarding trends is not available.

6.2.5 Unexpected Findings

None were reported. We have not found evidence in the published literature that clearly demonstrates unintended consequences from implementation of the measure and will continue to monitor the published literature.

Measure Developer POC

United States

Measured/accountable entity (reliability and/or validity) methodology and results (if available)

Measured entity (reliability and validity) methodology and results (if available), Person or encounter-level (reliability and validity) methodology and results (if available)

Responder for Survey

Patient

The measure developer is different from the measure steward

Yes

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