

eMeasure Title	Safe Use of Opioids - Concurrent Prescribing		
eMeasure Identifier (Measure Authoring Tool)	506	eMeasure Version number	0.0.046
NQF Number	N/A	GUID	33b40c00-909a-4490-8093-999fbcdc3480
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	Centers for Medicare & Medicaid Services (CMS)		
Measure Developer	Mathematica Policy Research		
Endorsed By	None		
Description	Patients ages 18 years and older with active, concurrent prescriptions for opioids at discharge, or patients with active, concurrent prescriptions for an opioid and benzodiazepine at discharge		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>Unintentional opioid overdose fatalities have become an epidemic in the last 20 years and a major public health concern in the United States (Rudd 2016). Reducing the number of unintentional overdoses has become a priority for numerous federal organizations including the Centers for Disease Control and Prevention (CDC), the Federal Interagency Workgroup for Opioid Adverse Drug Events, and the Substance Abuse and Mental Health Services Administration.</p> <p>Concurrent prescriptions of opioids or opioids and benzodiazepines puts patients at a greater risk of unintentional overdose due to the increased risk</p>		

	<p>of respiratory depression (Dowell 2016). An analysis of national prescribing patterns shows that more than half of patients who received an opioid prescription in 2009 had filled another opioid prescription within the previous 30 days (NIDA 2011). Another analysis of more than 1 million hospital admissions in the United States found that over 43% of all patients with nonsurgical admissions were exposed to multiple opioids during their hospitalization (Herzig 2013). Studies of multiple claims and prescription databases have shown that between 5%-15% percent of patients receive concurrent opioid prescriptions and 5%-20% of patients receive concurrent opioid and benzodiazepine prescriptions across various settings (Liu 2013, Mack 2015, Park 2015). Patients who have multiple opioid prescriptions have an increased risk for overdose (Jena 2014). Rates of fatal overdose are ten times higher in patients who are co-dispensed opioid analgesics and benzodiazepines than opioids alone (Dasgupta 2015). Furthermore, concurrent use of benzodiazepines with opioids was prevalent in 31%-51% of fatal overdoses (Dowell 2016). Emergency Department (ED) visit rates involving both opioid analgesics and benzodiazepines increased from 11.0 in 2004 to 34.2 per 100,000 population in 2011 (Jones 2015).</p> <p>Adopting a measure that calculates the proportion of patients two or more different opioids or opioids and benzodiazepines concurrently, has the potential to reduce preventable mortality and reduce the costs associated with adverse events related to opioid use by 1) encouraging providers to identify patients with concurrent prescriptions of opioids or opioids and benzodiazepines and 2) discouraging providers from prescribing two or more different opioids or opioids and benzodiazepines concurrently.</p>
Clinical Recommendation Statement	<p>The CDC Guideline for Prescribing Opioids for Chronic Pain (2016) recommends that for patients found to have multiple opioid prescriptions clinicians should:</p> <ul style="list-style-type: none"> - "Discuss information from the Prescription Drug Monitoring Program (PDMP) with their patient and confirm that the patient is aware of the additional prescriptions." - "Discuss safety concerns, including increased risk for respiratory depression and overdose, with patients found to be receiving opioids from more than one prescriber or receiving medications that increase risk when combined with opioids and consider offering naloxone." - "Calculate the total morphine milligram equivalents (MME)/day for concurrent opioid prescriptions to help assess the patient's overdose risk. If patients are found to be receiving high total daily dosages of opioids, clinicians should discuss their safety concerns with the patient, consider tapering to a safer dosage." - "Discuss safety concerns with other clinicians who are prescribing controlled substances for their patient. Ideally clinicians should first discuss concerns with their patient and inform him or her that they plan to coordinate care with the patient's other prescribers to improve the patient's safety." <p>The 2016 CDC Guideline for Prescribing Opioids for Chronic Pain also recommends that:</p> <ul style="list-style-type: none"> - "Clinicians should avoid prescribing opioids and benzodiazepines concurrently whenever possible. Clinicians should communicate with others managing the patient to discuss the patient's needs, prioritize patient goals, weigh risks of concurrent benzodiazepine and opioid exposure, and coordinate care." - "Clinicians should check the PDMP for concurrent controlled medications prescribed by other clinicians and should consider involving pharmacists and pain specialists as part of the management team when opioids are co-prescribed with other central nervous system depressants."

	- "Experts emphasized that clinicians should communicate with mental health professionals managing the patient to discuss the patient's needs, prioritize patient goals, weigh risks of concurrent benzodiazepine and opioid exposure, and coordinate care."
Improvement Notation	Improvement noted as an decrease in the rate
Reference	Rudd, R., Aleshire, N., Zibbell, J., et al. "Increases in Drug and Opioid Overdose Deaths - United States, 2000-2014". MMWR, Jan 2016. 64(50);1378-82 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm
Reference	Liu, Y., Logan, J., Paulozzi, L., et al. "Potential Misuse and Inappropriate Prescription Practices Involving Opioid Analgesics". Am J Manag Care. 2013 Aug;19(8):648-65. http://www.ajmc.com/journals/issue/2013/2013-1-vol19-n8/Potential-Misuse-and-Inappropriate-Prescription-Practices-Involving-Opioid-Analgesics/
Reference	Mack, K., Zhang, K., et al. "Prescription Practices involving Opioid Analgesics among Americans with Medicaid, 2010", J Health Care Poor Underserved. 2015 Feb; 26(1): 182-198. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4365785/
Reference	Herzig, S., Rothberg, M., Cheung, M., et al. "Opioid utilization and opioid-related adverse events in nonsurgical patients in US hospitals". Nov 2013. DOI: 10.1002/jhm.2102. http://onlinelibrary.wiley.com/doi/10.1002/jhm.2102/abstract
Reference	Jones, CM., McAninch, JK. "Emergency Department Visits and Overdose Deaths From Combined Use of Opioids and Benzodiazepines". Am J Prev Med. 2015 Oct;49(4):493-501. doi: 10.1016/j.amepre.2015.03.040. Epub 2015 Jul 3. http://www.ncbi.nlm.nih.gov/pubmed/26143953
Reference	National Institute on Drug Abuse. "Analysis of opioid prescription practices finds areas of concern". April 2011. Retrieved from https://www.drugabuse.gov/news-events/news-releases/2011/04/analysis-opioid-prescription-practices-finds-areas-concern
Reference	Jena, A., et al. "Opioid prescribing by multiple providers in Medicare: retrospective observational study of insurance claims", BMJ 2014; 348:g1393 doi: 10.1136/bmj.g1393. http://www.bmj.com/content/348/bmj.g1393
Reference	Dasgupta, N., et al. "Cohort Study of the Impact of High-dose Opioid Analgesics on Overdose Mortality", Pain Medicine, Wiley Periodicals, Inc., Sep 2015. http://onlinelibrary.wiley.com/doi/10.1111/pme.12907/abstract
Reference	Park, T., et al. "Benzodiazepine Prescribing Patterns and Deaths from Drug Overdose among US Veterans Receiving Opioid Analgesics: Case-cohort Study", BMJ 2015; 350:h2698. http://www.bmj.com/content/350/bmj.h2698
Reference	Dowell, D., Haegerich, T., Chou, R. "CDC Guideline for Prescribing Opioids for Chronic Pain - United States, 2016". MMWR Recomm Rep 2016;65. http://www.cdc.gov/media/dpk/2016/dpk-opioid-prescription-guidelines.html
Reference	Washington Agency Medical Directors' Group Interagency Guideline on Prescribing Opioids for Pain, Part II: Prescribing Opioids in the Acute and

	Subacute Phase 2015. http://www.agencymeddirectors.wa.gov/Files/2015AMDGOpioidGuideline.pdf
Reference	U.S. Department of Veterans Affairs. (2014). Opioid Safety Initiative Toolkit. Retrieved from http://www.va.gov/PAINMANAGEMENT/Opioid_Safety_Initiative_Toolkit.asp
Reference	U.S. Department of Veterans Affairs. (2016). "Opioid Safety Initiative: Opioids (including tramadol) Used in Combination with Benzodiazepine Derivative Sedatives/Hypnotics." Unpublished document
Definition	Opioid: Any Schedule II or Schedule III opioid medication Benzodiazepine: Any Schedule IV benzodiazepine medication Qualifying Encounter: A visit that occurs in all hospital inpatient, ED, and hospital outpatient settings excluding inpatient psychiatric, hospice or palliative care, substance abuse or mental health, dialysis, ancillary care or encounters occurring in ambulatory surgical centers Hospital Inpatient Encounter: Patient was formally admitted to the hospital Hospital Outpatient Encounter: Patient was not formally admitted to the hospital, was registered on the hospital records as an outpatient and received services (rather than supplies alone) from the hospital Numerator criteria: Active prescriptions include medications started before the encounter or newly prescribed before the end of the encounter
Guidance	None
Transmission Format	TBD
Initial Population	Patients ages 18 years and older on an active opioid or benzodiazepine prescription during the measurement period, discharged from a hospital encounter (inpatient, ED, or outpatient) during the measurement period
Denominator	Equals Initial Population
Denominator Exclusions	Patients with cancer or patients receiving palliative care
Numerator	Patients with active, concurrent prescriptions for opioids at discharge, or patients with active, concurrent prescriptions for an opioid and benzodiazepine at discharge
Numerator Exclusions	None
Denominator Exceptions	None
Supplemental Data Elements	For every patient evaluated by this measure also identify payer, race, ethnicity and gender

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[Population Criteria](#)

- **Initial Population =**
 - AND: Age >= 18 year(s) at: "Measurement Period"
 - AND: \$HealthcareEncounter
 - AND:
 - # Identify any patient on an active opioid or benzodiazepine at some point during the measurement period or newly prescribed an opioid or benzodiazepine at discharge from a qualifying hospital encounter
 - OR: "Medication, Active: Schedule II and Schedule III Opioids" overlaps "Measurement Period"
 - OR: "Medication, Active: Benzodiazepines" overlaps "Measurement Period"
 - OR: Union of:
 - "Medication, Discharge: Schedule II and Schedule III Opioids"
 - "Medication, Discharge: Benzodiazepines"
 - during \$HealthcareEncounter
- **Denominator =**
 - AND: Initial Population
- **Denominator Exclusions =**
 - OR: "Diagnosis: All Cancer" overlaps Occurrence A of \$HealthcareEncounter
 - OR: "Intervention, Performed: Palliative care" overlaps Occurrence A of \$HealthcareEncounter
- **Numerator =**
 - AND:
 - OR:
 - # Patient on active opioid on arrival, still active at discharge and prescribed either opioid or benzodiazepine at discharge
 - AND: "Occurrence A of Medication, Active: Schedule II and Schedule III Opioids" starts before or concurrent with start of Occurrence A of \$HealthcareEncounter
 - AND NOT: "Occurrence A of Medication, Active: Schedule II and Schedule III Opioids" ends before end of Occurrence A of \$HealthcareEncounter
 - AND: Union of:
 - "Medication, Discharge: Schedule II and Schedule III Opioids"
 - "Medication, Discharge: Benzodiazepines"
 - during Occurrence A of \$HealthcareEncounter
 - OR:
 - # Patient on active benzodiazepine on arrival, still active at discharge and prescribed an opioid at discharge
 - AND: "Occurrence A of Medication, Active: Benzodiazepines" starts before or concurrent with start of Occurrence A of \$HealthcareEncounter
 - AND NOT: "Occurrence A of Medication, Active: Benzodiazepines" ends before end of Occurrence A of \$HealthcareEncounter
 - AND: "Medication, Discharge: Schedule II and Schedule III Opioids" during Occurrence A of \$HealthcareEncounter
 - # Patient prescribed more than one opioid at discharge
 - OR: Count >= 2 : "Medication, Discharge: Schedule II and Schedule III Opioids" during Occurrence A of \$HealthcareEncounter
 - OR:
 - # Patient prescribed an opioid and benzodiazepine at discharge
 - AND: "Medication, Discharge: Schedule II and Schedule III Opioids" during Occurrence A of \$HealthcareEncounter
 - AND: "Medication, Discharge: Benzodiazepines" during Occurrence A of \$HealthcareEncounter
 - OR:
 - # Patient on active, concurrent prescriptions of opioids on arrival, still active at discharge
 - AND: "Occurrence A of Medication, Active: Schedule II and Schedule III Opioids" starts before or concurrent with start of Occurrence A of \$HealthcareEncounter
 - AND NOT: "Occurrence A of Medication, Active: Schedule II and Schedule III Opioids" ends before end of Occurrence A of \$HealthcareEncounter

- AND: "Occurrence B of Medication, Active: Schedule II and Schedule III Opioids" starts before or concurrent with start of Occurrence A of \$HealthcareEncounter
 - AND NOT: "Occurrence B of Medication, Active: Schedule II and Schedule III Opioids" ends before end of Occurrence A of \$HealthcareEncounter
 - AND: Count >= 2 : Union of:
 - "Occurrence A of Medication, Active: Schedule II and Schedule III Opioids"
 - "Occurrence B of Medication, Active: Schedule II and Schedule III Opioids"
- OR:
 - # Patient on active opioid and benzodiazepine on arrival, still active at discharge
 - AND: "Occurrence A of Medication, Active: Schedule II and Schedule III Opioids" starts before or concurrent with start of Occurrence A of \$HealthcareEncounter
 - AND NOT: "Occurrence A of Medication, Active: Schedule II and Schedule III Opioids" ends before end of Occurrence A of \$HealthcareEncounter
 - AND: "Occurrence A of Medication, Active: Benzodiazepines" starts before or concurrent with start of Occurrence A of \$HealthcareEncounter
 - AND NOT: "Occurrence A of Medication, Active: Benzodiazepines" ends before end of Occurrence A of \$HealthcareEncounter
- **Numerator Exclusions =**
 - None
- **Denominator Exceptions =**
 - None
- **Stratification =**
 - None

Data Criteria (QDM Variables)

- **\$HealthcareEncounter =**
 - Union of:
 - "Encounter, Performed: Encounter Inpatient (length of stay <= 120 day(s))"
 - "Encounter, Performed: Encounter ED"
 - "Encounter, Performed: Encounter Hospital Outpatient"
 - ends during "Measurement Period"

Data Criteria (QDM Data Elements)

- "Diagnosis: All Cancer" using "All Cancer Grouping Value Set (2.16.840.1.113883.3.464.1003.108.12.1011)"
- "Encounter, Performed: Encounter ED" using "Encounter ED Grouping Value Set (2.16.840.1.113883.3.3157.1002.81)"
- "Encounter, Performed: Encounter Hospital Outpatient" using "Encounter Hospital Outpatient SNOMEDCT Value Set (2.16.840.1.113883.3.3157.1002.14)"
- "Encounter, Performed: Encounter Inpatient" using "Encounter Inpatient SNOMEDCT Value Set (2.16.840.1.113883.3.666.5.307)"
- "Intervention, Performed: Palliative care" using "Palliative care Grouping Value Set (2.16.840.1.113762.1.4.1125.3)"
- "Medication, Active: Benzodiazepines" using "Benzodiazepines RXNORM Value Set (2.16.840.1.113762.1.4.1125.1)"
- "Medication, Active: Schedule II and Schedule III Opioids" using "Schedule II and Schedule III Opioids RXNORM Value Set (2.16.840.1.113762.1.4.1125.2)"
- "Medication, Discharge: Benzodiazepines" using "Benzodiazepines RXNORM Value Set (2.16.840.1.113762.1.4.1125.1)"
- "Medication, Discharge: Schedule II and Schedule III Opioids" using "Schedule II and Schedule III Opioids RXNORM Value Set (2.16.840.1.113762.1.4.1125.2)"

Supplemental Data Elements

- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity CDCREC Value Set (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer" using "Payer SOP Value Set (2.16.840.1.114222.4.11.3591)"
- "Patient Characteristic Race: Race" using "Race CDCREC Value Set (2.16.840.1.114222.4.11.836)"
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex AdministrativeGender Value Set (2.16.840.1.113762.1.4.1)"

Risk Adjustment Variables

- None

Measure Set	
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