eCQM Title	**Documentation of Current Medications in the Medical Record**		
eCQM Identifier (Measure Authoring Tool)	68	**eCQM Version number**	8.1.000
NQF Number	0419	**GUID**	9a032d9c-3d9b-11e1-8634-00237d5bf174
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	Centers for Medicare & Medicaid Services (CMS)		
Measure Developer	Quality Insights		
Endorsed By	National Quality Forum		
Description	Percentage of visits for patients aged 18 years and older for which the eligible professional or eligible clinician attests to documenting a list of current medications using all immediate resources available on the date of the encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications' name, dosage, frequency and route of administration.		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	Prescription medication use is common among adults of all ages, particularly older adults and adults with chronic conditions. On		

average, 81% of adults in the U.S. are taking at least one medication (prescription or nonprescription, vitamin/mineral, herbal/natural supplement); 29% are taking five or more. Older adults are the biggest consumers of medications with 17-19% of people 65 and older taking at least ten medications in a given week (Qato et al., 2008). In this context, maintaining an accurate and complete medication list has proven to be a challenging documentation endeavor for various health care provider settings. While most of outpatient encounters (2/3) result in providers prescribing at least one medication, hospitals have been the focus of medication safety efforts (Stock et al., 2009). Nassaralla et al. (2007) caution that this is at odds with the current trend, where patients with chronic illnesses are increasingly being treated in the outpatient setting and require careful monitoring of multiple medications. Additionally Nassaralla et al. (2007) reveal that it is in fact in outpatient settings where more fatal adverse drug events (ADE) occur when these are compared to those occurring in hospitals (1 of 131 outpatient deaths compared to 1 in 854 inpatient deaths). In the outpatient setting, adverse drug events (ADEs) occur 25% of the time and over one-third of these are considered preventable (Tache et al., 2011). Particularly vulnerable are patients over 65 years, with evidence suggesting that the rate of ADEs per 10,000 person per year increases with age; 25-44 years old at 1.3; 45-64 at 2.2, and 65 + at 3.8 (Sarkar et al., 2011). Another vulnerable group are chronically ill individuals. These population groups are more likely to experience ADEs and subsequent hospitalization.

A multiplicity of providers and inadequate care coordination among them has been identified as barriers to collecting complete and reliable medication records. Data indicate that reconciliation and documentation continues to be poorly executed with discrepancies occurring in 92% (74 of 80 patients) of medication lists among admittance to the emergency room. Of 80 patients included in the study, the home medications were re ordered for 65% of patients on their admission and of the 65% the majority (29%) had a change in their dosing interval, while 23% had a change in their route of administration, and 13% had a change in dose. A total of 361 medication discrepancies, or the difference between the medications patients were taking before admission and those listed in there admission orders, were identified in at least 74 patients (Poornima et al., 2015). The study found that "Through an appropriate reconciliation programme, around 80% of errors relating to medication and the potential harm caused by these errors could be reduced." (Poornima et al., 2015, p. 243).

Documentation of current medications in the medical record facilitates the process of medication review and reconciliation by the provider, which are necessary for reducing ADEs and promoting medication safety. The need for provider to provider coordination regarding medication records, and the existing gap in implementation, is highlighted in the American Medical Association's (AMA) Physician's Role in Medication Reconciliation (2007), which states that "critical patient information, including medical and medication histories, current medications the patient is receiving and taking, and sources of medications, is essential to the delivery of safe medical care. However, interruptions in the continuity of care and information gaps in patient health records are common and significantly affect patient outcomes" (American Medical Association, 2007, p. 7). This is because clinical decisions based on information that is incomplete and/or inaccurate are likely to lead to medication error and ADEs. Weeks et al. (2010) noted similar barriers and

	identified the utilization of health information technology as an opportunity for facilitating the creation of universal medication lists. One 2015 meta-analysis showed an association between EHR documentation with an overall RR of 0.46 (95% CI = 0.38 to 0.55; P < 0.001) and ADEs with an overall RR of 0.66 (95% CI = 0.44 to 0.99; P = 0.045). This meta-analysis provides evidence that the use of the EHR can improve the quality of healthcare delivered to patients by reducing medication errors and ADEs (Campanella et al., 2016).
Clinical Recommendation Statement	The Joint Commission's 2015 Ambulatory Care National Patient Safety Goals guide providers to maintain and communicate accurate patient medication information. Specifically, the section "Use Medicines Safely NPSG.03.06.01" states the following: "Maintain and communicate accurate patient medication information. The types of information that clinicians use to reconcile medications include (among others) medication name, dose, frequency, route, and purpose. Organizations should identify the information that needs to be collected to reconcile current and newly ordered medications and to safely prescribe medications in the future." (Joint Commission, 2015, retrieved at: http://www.jointcommission.org/assets/1/6/2015_NPSG_AHC1.PDF). The National Quality Forum's 2010 update of the Safe Practices for Better Healthcare, states healthcare organizations must develop, reconcile, and communicate an accurate patient medication list throughout the continuum of care (p. 40).
Improvement Notation	Higher score indicates better quality
Reference	American Medical Association (2007). The physician's role in medication reconciliation: Issues, strategies and safety principles. Retrieved from https://bcpsqc.ca/documents/2012/09/AMA-The-physician%e2%80%99s-role-in-Medication-Reconciliation.pdf
Reference	Campanella Paolo, Lovato Emanuela, Marone Claudio, Fallacara Lucia, Mancuso Agostino, Ricciardi Walter, Specchia Maria Lucia. The impact of electronic health records on healthcare quality: A systematic review and meta-analysis. European journal of public health, 26,1,2016:60-64.
Reference	Nassaralla, C.L., Naessens, J.M., Chaudhry, R., et al. (2007). Implementation of a medication reconciliation process in an ambulatory internal medicine clinic. Quality and Safety in Health Care 2007; (16), 90-94.
Reference	National Quality Forum (2010). Safe Practices for Better Healthcare - 2010 Update. Retrieved from http://www.qualityforum.org/Projects/Safe_Practices_2010.aspx
Reference	Poornima P, Reshma P, Ramakrishnan TV, Rani NV, Devi GS, Shree R, Seshadri P. Medication reconciliation and medication error prevention in an emergency department of a tertiary care hospital. Journal of Young Pharmacists, 2015, 7, 3, 241-249
Reference	Qato D.M., Alexander G. C., Conti, R.M., Johnson, M., Schumm, P., Tessler Lindau, S. Use of Prescription and Over-the-counter Medications and Dietary Supplements Among Older Adults in the United States. JAMA. 2008; 300(24):2867-2878. doi:10.1001/jama.2008.892
Reference	Sarkar, U., Lopez, A., Maselli, J.H., Gonzalez, R. (2011). Adverse Drug Events in U.S. Adult Ambulatory Medical Care. Health Services

	Reserach, 46(5), 1517-1533.
Reference	Stock, R., Scott, J., & Gurtel, S. (2009). Using an Electronic Prescribing System to Ensure Accurate Medication Lists in a Large Multidisciplinary Medical Group. The Joint Commission Journal on Quality and Patient Safety; 35(5), 271-277.
Reference	Tache, S.V., Sonnichsen, A., & Ashcroft, D.M. (2011). Prevalence of Adverse Drug Events in Ambulatory Care: A Systematic Review. The Annals of Pharmacotherapy, 45(7-8), 977-989. doi: 10.1345/aph.1P627.
Reference	The Joint Commission (2015). Ambulatory Care National Patient Safety Goals. Retrieved from http://www.jointcommission.org/assets/1/6/2015_NPSG_AHC1.PDF
Reference	Weeks, D.L., Corbette, C.F., Stream, G. (2010). Beliefs of Ambulatory Care Physicians about Accuracy of Patient Medication Records and Technology-Enhanced Solutions to Improve Accuracy. Journal for Healthcare Quality; 32(5), 12-21.
Definition	Current Medications: Medications the patient is presently taking including all prescriptions, over-the-counters, herbals and vitamin/mineral/dietary (nutritional) supplements with each medication's name, dosage, frequency and administered route. Route: Documentation of the way the medication enters the body (some examples include but are not limited to: oral, sublingual, subcutaneous injections, and/or topical).
Guidance	This measure is to be reported for every encounter during the measurement period. Eligible professionals or eligible clinicians reporting this measure may document medication information received from the patient, authorized representative(s), caregiver(s) or other available healthcare resources. This list must include all prescriptions, over-the-counter (OTC) products, herbals, vitamins, minerals, dietary (nutritional) supplements AND must contain the medications' name, dosage, frequency and route of administration. This measure should also be reported if the eligible professional or eligible clinician documented the patient is not currently taking any medications. By reporting the action described in this measure, the provider attests to having documented a list of current medications utilizing all immediate resources available at the time of the encounter.
Transmission Format	TBD
Initial Population	All visits occurring during the 12 month measurement period for patients aged 18 years and older.
Denominator	Equals Initial Population
Denominator Exclusions	None
Numerator	Eligible professional or eligible clinician attests to documenting,

	updating or reviewing the patient's current medications using all immediate resources available on the date of the encounter. This list must include ALL known prescriptions, over-the-counters, herbals and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications' name, dosages, frequency and route of administration
Numerator Exclusions	Not Applicable
Denominator Exceptions	Medical Reason: Patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient's health status
Supplemental Data Elements	For every patient evaluated by this measure also identify payer, race, ethnicity and sex

Table of Contents

Population Criteria

- **Initial Population**
  - "Qualifying Encounters During Measurement Period" QualifyingEncounter
  - where "Patient Age 18 or Older at Start of Measurement Period"

- **Denominator**
  - "Initial Population"

- **Denominator Exclusions**
  - None

- **Numerator**

- "Medications Documented During Qualifying Encounter"

- **Numerator Exclusions**
  - None
- **Denominator Exceptions**
  - "Qualifying Encounters During Measurement Period" EncounterDuringMeasurementPeriod
  - with "Medications Not Documented for Medical Reason" MedicationsNotDocumented
  - such that MedicationsNotDocumented.authorDatetime during EncounterDuringMeasurementPeriod.relevantPeriod
- **Stratification**
  - None

Definitions

- **Denominator**
  - "Initial Population"
- **Denominator Exceptions**
  - "Qualifying Encounters During Measurement Period" EncounterDuringMeasurementPeriod
  - with "Medications Not Documented for Medical Reason" MedicationsNotDocumented
  - such that MedicationsNotDocumented.authorDatetime during EncounterDuringMeasurementPeriod.relevantPeriod
- **Initial Population**
  - "Qualifying Encounters During Measurement Period" QualifyingEncounter

- where "Patient Age 18 or Older at Start of Measurement Period"

- **Medications Documented During Qualifying Encounter**
  - "Qualifying Encounters During Measurement Period" QualifyingEncounterDuringMeasurementPeriod
  - with ["Procedure, Performed": "Documentation of current medications (procedure)"] MedicationsDocumented
  - such that MedicationsDocumented.relevantPeriod during QualifyingEncounterDuringMeasurementPeriod .relevantPeriod

- **Medications Not Documented for Medical Reason**
  - ["Procedure, Not Performed": "Documentation of current medications (procedure)"] NotPerformed
  - where NotPerformed.negationRationale in "Medical or Other reason not done"

- **Numerator**
  - "Medications Documented During Qualifying Encounter"

- **Patient Age 18 or Older at Start of Measurement Period**
  - exists ["Patient Characteristic Birthdate"] BirthDate
  - where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 18

- **Qualifying Encounters During Measurement Period**
  - ["Encounter, Performed": "Medications Encounter Code Set"] QualifyingEncounter

        - where QualifyingEncounter.relevantPeriod during "Measurement Period"

    - **SDE Ethnicity**
        -
        - ["Patient Characteristic Ethnicity": "Ethnicity"]

    - **SDE Payer**
        -
        - ["Patient Characteristic Payer": "Payer"]

    - **SDE Race**
        -
        - ["Patient Characteristic Race": "Race"]

    - **SDE Sex**
        -
        - ["Patient Characteristic Sex": "ONC Administrative Sex"]

Functions

-
    - **Global.CalendarAgeInYearsAt(BirthDateTime DateTime, AsOf DateTime)**
        -
        - years between ToDate(BirthDateTime)and ToDate(AsOf)

    - **Global.ToDate(Value DateTime)**
        -
        - DateTime(year from Value, month from Value, day from Value, 0, 0, 0, 0, timezone from Value)

Terminology

- codesystem "SNOMEDCT" using "2.16.840.1.113883.6.96 version 2017-09"
- code "Documentation of current medications (procedure)" using "SNOMEDCT version 2017-09 Code (428191000124101)"
- valueset "Ethnicity" using "2.16.840.1.114222.4.11.837"
- valueset "Medical or Other reason not done" using "2.16.840.1.113883.3.600.1.1502"
- valueset "Medications Encounter Code Set" using "2.16.840.1.113883.3.600.1.1834"
- valueset "ONC Administrative Sex" using "2.16.840.1.113762.1.4.1"
- valueset "Payer" using "2.16.840.1.114222.4.11.3591"
- valueset "Race" using "2.16.840.1.114222.4.11.836"

Data Criteria (QDM Data Elements)

- "Encounter, Performed: Medications Encounter Code Set" using "Medications Encounter Code Set (2.16.840.1.113883.3.600.1.1834)"
- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer" using "Payer (2.16.840.1.114222.4.11.3591)"
- "Patient Characteristic Race: Race" using "Race (2.16.840.1.114222.4.11.836)"
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex (2.16.840.1.113762.1.4.1)"
- "Procedure, Not Performed: Documentation of current medications (procedure)" using "Documentation of current medications (procedure) (SNOMEDCT version 2017-09 Code 428191000124101)"
- "Procedure, Performed: Documentation of current medications (procedure)" using "Documentation of current medications (procedure) (SNOMEDCT version 2017-09 Code 428191000124101)"

Supplemental Data Elements

- **SDE Ethnicity**
  - ["Patient Characteristic Ethnicity": "Ethnicity"]
- **SDE Payer**
  - ["Patient Characteristic Payer": "Payer"]
- **SDE Race**
  - ["Patient Characteristic Race": "Race"]
- **SDE Sex**
  - ["Patient Characteristic Sex": "ONC Administrative Sex"]

Risk Adjustment Variables

- None

Measure Set	CLINICAL QUALITY MEASURE SET