

eCQM Title	Appropriate Treatment for Upper Respiratory Infection (URI)		
eCQM Identifier (Measure Authoring Tool)	154	eCQM Version Number	13.0.000
CBE Number	Not Applicable	GUID	e455facb-f2cb-4074-a351-1e68a90fb7cf
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	National Committee for Quality Assurance		
Measure Developer	National Committee for Quality Assurance		
Endorsed By	None		
Description	Percentage of episodes for patients 3 months of age and older with a diagnosis of upper respiratory infection (URI) that did not result in an antibiotic order.		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	<ul style="list-style-type: none"> - 3 months-17 years - 18-64 years - 65 years and older 		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>Most URI, also known as the common cold, are caused by viruses that require no antibiotic treatment. Too often, antibiotics are prescribed inappropriately, which can lead to antibiotic resistance (when antibiotics can no longer cure bacterial infections) in the United States, at least 2.8 million antibiotic-resistant illnesses and 35,000 deaths occur each year (Centers for Disease Control and Prevention [CDC], 2020).</p> <p>American Family Physician (Fashner, Ericson, & Werner, 2012)</p> <ul style="list-style-type: none"> - Antibiotics should not be used for the treatment of cold symptoms in children or adults. (A) - Nonsteroidal anti-inflammatory drugs reduce pain secondary to upper respiratory tract infection in adults. (A) - Decongestants, antihistamine/decongestant combinations, and intranasal ipratropium (Atrovent) may improve cold symptoms in adults. (B) <p>Institute for Clinical Systems Improvement (ICSI) (Short et al., 2017) The ICSI work group does not recommend antibiotics for treatment of common cold symptoms in children and adults.</p>		
Improvement Notation	Higher score indicates better quality		
Reference	<p>Reference Type: CITATION</p> <p>Reference Text: 'Centers for Disease Control and Prevention. (2020). Be Antibiotics Aware: Smart Use, Best Care. Retrieved from https://www.cdc.gov/patientsafety/features/be-antibiotics-aware.html'</p>		
Reference	<p>Reference Type: CITATION</p> <p>Reference Text: 'Fashner, J., Ericson, K., & Werner, S. (2012). Treatment of the Common Cold in Children and Adults. American Family Physician, 86(2), 153-159.'</p>		
Reference	<p>Reference Type: JUSTIFICATION</p> <p>Reference Text: 'Harris, A.M., Hicks, L.A., & Qaseem, A. (2016). Appropriate Antibiotic Use for Acute Respiratory Tract Infection in Adults: Advice for High-Value Care from the American College of Physicians and the Centers for Disease Control and Prevention. Ann Intern Med. 164(6),425-434.'</p>		
Reference	<p>Reference Type: CITATION</p> <p>Reference Text: 'Short, S., Bashir, H., Marshall, P., Miller, N., Olmschenk, D., Prigge, K., & Solyntjes, L. (2017). Institute for Clinical Systems Improvement. Diagnosis and Treatment of Respiratory Illness in Children and Adults. Updated September 2017. Retrieved from https://www.icsi.org/wp-content/uploads/2019/01/Respliness.pdf.'</p>		
Definition	None		
Guidance	<p>This is an episode of care measure that examines all eligible episodes for the patient.</p> <p>This eCQM is an episode-based measure. An episode is defined as each eligible encounter for patients aged 3 months of age and older with a diagnosis of upper respiratory infection from January 1 to December 28 of the measurement period.</p> <p>This version of the eCQM uses QDM version 5.6. Please refer to the eCQI resource center (https://ecqi.healthit.gov/qdm) for more information on the QDM.</p>		
Transmission Format	TBD		
Initial Population	Outpatient visits, telephone visits, virtual encounter (i.e., e-visit or virtual check-in), or emergency department visits with a diagnosis of URI from January 1 to December 28 of the measurement period for patients 3 months of age and older		
Denominator	Equals Initial Population		
Denominator Exclusions	<p>Exclude URI episodes when the patient had hospice care for any part of the measurement period.</p> <p>Exclude URI episodes when the patient had a comorbid condition during the 12 months prior to or on the episode date.</p> <p>Exclude URI episodes where the patient is taking antibiotics in the 30 days prior to the episode date.</p> <p>Exclude URI episodes where the patient had competing diagnosis on or three days after the episode date.</p>		
Numerator	URI episodes without a prescription for antibiotic medication on or three days after the outpatient visit, telephone visit, virtual encounter, or emergency department visit for an upper respiratory infection		
Numerator Exclusions	Not Applicable		
Denominator Exceptions	None		
Supplemental Data Elements	For every patient evaluated by this measure also identify payer, race, ethnicity and sex		

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Population Criteria

Initial Population	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") >= 3 return EncounterWithURI
Denominator	"Initial Population"
Denominator Exclusions	"Encounters and Assessments with Hospice Patient" union "Encounter with Comorbid Condition for Upper Respiratory Infection Prior" union "Encounter with Upper Respiratory Infection and Antibiotics Active In 30 Days Prior to the Episode Date" union "Encounter with Competing Diagnosis for Upper Respiratory Infection"
Numerator	"Encounter with Upper Respiratory Infection" EncounterWithURI without ["Medication, Order": "Antibiotic Medications for Upper Respiratory Infection"] OrderedAntibiotic such that OrderedAntibiotic.authorDatetime 3 days or less on or after start of EncounterWithURI.relevantPeriod return EncounterWithURI
Numerator Exclusions	None
Denominator Exceptions	None
Stratification 1	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") >= 3 and AgeInYearsAt(date from start of "Measurement Period") <= 17 return EncounterWithURI
Stratification 2	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") in Interval[18, 64] return EncounterWithURI
Stratification 3	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") >= 65 return EncounterWithURI

Definitions

Denominator	"Initial Population"
Denominator Exclusions	"Encounters and Assessments with Hospice Patient" union "Encounter with Comorbid Condition for Upper Respiratory Infection Prior" union "Encounter with Upper Respiratory Infection and Antibiotics Active In 30 Days Prior to the Episode Date" union "Encounter with Competing Diagnosis for Upper Respiratory Infection"
Encounter with Comorbid Condition for Upper Respiratory Infection Prior	("Encounter with Upper Respiratory Infection" EncounterWithURI with ["Diagnosis": "Comorbid Conditions for Respiratory Conditions"] ComorbidCondition such that start of ComorbidCondition.prevalencePeriod in day of Interval[start of EncounterWithURI.relevantPeriod - 1 year, start of EncounterWithURI.relevantPeriod])
Encounter with Competing Diagnosis for Upper Respiratory Infection	("Encounter with Upper Respiratory Infection" EncounterWithURI with ["Diagnosis": "Competing Conditions for Respiratory Conditions"] union ["Diagnosis": "Acute Pharyngitis"] union ["Diagnosis": "Acute Tonsillitis"]) CompetingDiagnosis such that CompetingDiagnosis.prevalencePeriod starts 3 days or less on or after day of start of EncounterWithURI.relevantPeriod return EncounterWithURI)
Encounter with Upper Respiratory Infection	from "Qualifying Encounters": "QualifyingEncounters" ["Diagnosis": "Upper Respiratory Infection"] URI where URI.prevalencePeriod starts during day of QualifyingEncounters.relevantPeriod or URI.prevalencePeriod overlaps before QualifyingEncounters.relevantPeriod return QualifyingEncounters
Encounter with Upper Respiratory Infection and Antibiotics Active In 30 Days Prior to the Episode Date	"Encounter with Upper Respiratory Infection" EncounterWithURI with ["Medication, Active": "Antibiotic Medications for Upper Respiratory Infection"] ActiveAntibiotic such that (Global."NormalZeitInterval" (ActiveAntibiotic.relevantDatetime, ActiveAntibiotic.relevantPeriod) overlaps day of Interval[start of EncounterWithURI.relevantPeriod - 30 days, start of EncounterWithURI.relevantPeriod - 1 day]) return EncounterWithURI
Encounters and Assessments with Hospice Patient	"Initial Population" InitialPopulation where Hospice."Has Hospice Services"
Hospice.Has Hospice Services	exists (["Encounter, Performed": "Encounter Inpatient"] InpatientEncounter where (InpatientEncounter.dischargeDisposition = "Discharge to home for hospice care (procedure)" or InpatientEncounter.dischargeDisposition = "Discharge to healthcare facility for hospice care (procedure)") and InpatientEncounter.relevantPeriod ends during day of "Measurement Period") or exists (["Encounter, Performed": "Hospice Encounter"] HospiceEncounter where HospiceEncounter.relevantPeriod overlaps day of "Measurement Period") or exists (["Assessment, Performed": "Hospice care [Minimum Data Set]"] HospiceAssessment where HospiceAssessment.result == "Yes (qualifier value)" and Global."NormalZeitInterval" (HospiceAssessment.relevantDatetime, HospiceAssessment.relevantPeriod) overlaps day of "Measurement Period") or exists (["Intervention, Order": "Hospice Care Ambulatory"] HospiceOrder where HospiceOrder.authorDatetime during day of "Measurement Period") or exists (["Intervention, Performed": "Hospice Care Ambulatory"] HospicePerformed where Global."NormalZeitInterval" (HospicePerformed.relevantDatetime, HospicePerformed.relevantPeriod) overlaps day of "Measurement Period") or exists (["Diagnosis": "Hospice Diagnosis"] HospiceCareDiagnosis where HospiceCareDiagnosis.prevalencePeriod overlaps day of "Measurement Period")
Initial Population	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") >= 3 return EncounterWithURI
Numerator	"Encounter with Upper Respiratory Infection" EncounterWithURI without ["Medication, Order": "Antibiotic Medications for Upper Respiratory Infection"] OrderedAntibiotic such that OrderedAntibiotic.authorDatetime 3 days or less on or after start of EncounterWithURI.relevantPeriod return EncounterWithURI
Qualifying Encounters	(["Encounter, Performed": "Emergency Department Evaluation and Management Visit"] union ["Encounter, Performed": "Home Healthcare Services"] union ["Encounter, Performed": "Medical Disability Exam"] union ["Encounter, Performed": "Office Visit"] union ["Encounter, Performed": "Outpatient Consultation"] union ["Encounter, Performed": "Preventive Care Services Group Counseling"] union ["Encounter, Performed": "Preventive Care Services Individual Counseling"] union ["Encounter, Performed": "Preventive Care Services, Initial Office Visit, 0 to 17"] union ["Encounter, Performed": "Preventive Care, Established Office Visit, 0 to 17"] union ["Encounter, Performed": "Preventive Care Services Established Office Visit, 18 and Up"] union ["Encounter, Performed": "Preventive Care Services Initial Office Visit, 18 and Up"] union ["Encounter, Performed": "Telephone Visits"] union ["Encounter, Performed": "Virtual Encounter"] union ["Encounter, Performed": "Unlisted preventive medicine service"] ValidEncounters where ValidEncounters.relevantPeriod ends during day of Interval[start of "Measurement Period", end of "Measurement Period" - 3 days])
SDE Ethnicity	[Patient Characteristic Ethnicity]: "Ethnicity"
SDE Payer	[Patient Characteristic Payer]: "Payer Type"
SDE Race	[Patient Characteristic Race]: "Race"
SDE Sex	[Patient Characteristic Sex]: "ONC Administrative Sex"
Stratification 1	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") >= 3 and AgeInYearsAt(date from start of "Measurement Period") <= 17 return EncounterWithURI
Stratification 2	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") in Interval[18, 64] return EncounterWithURI
Stratification 3	"Encounter with Upper Respiratory Infection" EncounterWithURI where AgeInMonthsAt(date from start of "Measurement Period") >= 65 return EncounterWithURI

Functions

Global.NormalZeitInterval(pointInTime DateTime, period Interval<DateTime>)	if pointInTime is not null then Interval(pointInTime, pointInTime) else if period is not null then period else null as Interval<DateTime>
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Terminology

- Discharge to healthcare facility for hospice care (procedure) ("SNOMEDCT Code (428371000124100)")
- code "Discharge to home for hospice care (procedure)" ("SNOMEDCT Code (428361000124107)")
- code "Hospice care [Minimum Data Set]" (L0INC Code (45755-6))
- code "Unlisted preventive medicine service" ("CPT Code (99429)")
- code "Yes (qualifier value)" ("SNOMEDCT Code (373066001)")
- valueSet "Acute Pharyngitis" (2.16.840.1.113883.3.464.1003.102.12.1011)
- valueSet "Acute Tonsillitis" (2.16.840.1.113883.3.464.1003.102.12.1012)
- valueSet "Antibiotic Medications for Upper Respiratory Infection" (2.16.840.1.113883.3.464.1003.1190)
- valueSet "Comorbid Conditions for Respiratory Conditions" (2.16.840.1.113883.3.464.1003.102.12.1025)
- valueSet "Competing Conditions for Respiratory Conditions" (2.16.840.1.113883.3.464.1003.102.12.1017)
- valueSet "Emergency Department Evaluation and Management Visit" (2.16.840.1.113883.3.464.1003.101.12.1010)
- valueSet "Encounter Inpatient" (2.16.840.1.113883.3.666.5.307)
- valueSet "Ethnicity" (2.16.840.1.114222.4.11.3591)
- valueSet "Home Healthcare Services" (2.16.840.1.113883.3.464.1003.101.12.1016)
- valueSet "Hospice Care Ambulatory" (2.16.840.1.113883.3.526.3.1584)
- valueSet "Hospice Diagnosis" (2.16.840.1.113883.3.464.1003.1165)
- valueSet "Hospice Encounter" (2.16.840.1.113883.3.464.1003.1003)
- valueSet "Medical Disability Exam" (2.16.840.1.113883.3.464.1003.101.12.1073)
- valueSet "Office Visit" (2.16.840.1.113883.3.464.1003.101.12.1001)
- valueSet "ONC Administrative Sex" (2.16.840.1.113762.1.4.1)
- valueSet "Outpatient Consultation" (2.16.840.1.113883.3.464.1003.101.12.1008)
- valueSet "Payer Type" (2.16.840.1.114222.4.11.3591)
- valueSet "Preventive Care Services Established Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1025)
- valueSet "Preventive Care Services Group Counseling" (2.16.840.1.113883.3.464.1003.101.12.1027)
- valueSet "Preventive Care Services Individual Counseling" (2.16.840.1.113883.3.464.1003.101.12.1026)
- valueSet "Preventive Care Services, Initial Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1023)
- valueSet "Preventive Care, Established Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1022)
- valueSet "Preventive Care Services, Initial Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1024)
- valueSet "Preventive Care, Established Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1024)
- valueSet "Preventive Care Services Initial Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1023)
- valueSet "Race" (2.16.840.1.114222.4.11.3591)
- valueSet "Telephone Visits" (2.16.840.1.113883.3.464.1003.101.12.1080)
- valueSet "Upper Respiratory Infection" (2.16.840.1.113883.3.464.1003.102.12.1022)
- valueSet "Virtual Encounter" (2.16.840.1.113883.3.464.1003.101.12.1089)

Data Criteria (QDM Data Elements)

- "Assessment, Performed: Hospice care [Minimum Data Set]" using "Hospice care [Minimum Data Set]" (L0INC Code (45755-6))
- "Diagnosis: Acute Pharyngitis" using "Acute Pharyngitis" (2.16.840.1.113883.3.464.1003.102.12.1011)
- "Diagnosis: Acute Tonsillitis" using "Acute Tonsillitis" (2.16.840.1.113883.3.464.1003.102.12.1012)
- "Diagnosis: Comorbid Conditions for Respiratory Conditions" using "Comorbid Conditions for Respiratory Conditions" (2.16.840.1.113883.3.464.1003.102.12.1025)
- "Diagnosis: Competing Conditions for Respiratory Conditions" using "Competing Conditions for Respiratory Conditions" (2.16.840.1.113883.3.464.1003.102.12.1017)
- "Diagnosis: Hospice Diagnosis" using "Hospice Diagnosis" (2.16.840.1.113883.3.464.1003.1165)
- "Diagnosis: Upper Respiratory Infection" using "Upper Respiratory Infection" (2.16.840.1.113883.3.464.1003.102.12.1022)
- "Encounter, Performed: Emergency Department Evaluation and Management Visit" using "Emergency Department Evaluation and Management Visit" (2.16.840.1.113883.3.464.1003.101.12.1010)
- "Encounter, Performed: Encounter Inpatient" using "Encounter Inpatient" (2.16.840.1.113883.3.666.5.307)
- "Encounter, Performed: Home Healthcare Services" using "Home Healthcare Services" (2.16.840.1.113883.3.464.1003.101.12.1016)
- "Encounter, Performed: Hospice Encounter" using "Hospice Encounter" (2.16.840.1.113883.3.464.1003.1003)
- "Encounter, Performed: Medical Disability Exam" using "Medical Disability Exam" (2.16.840.1.113883.3.464.1003.101.12.1073)
- "Encounter, Performed: Office Visit" using "Office Visit" (2.16.840.1.113883.3.464.1003.101.12.1001)
- "Encounter, Performed: Outpatient Consultation" using "Outpatient Consultation" (2.16.840.1.113883.3.464.1003.101.12.1008)
- "Encounter, Performed: Preventive Care Services Group Counseling" using "Preventive Care Services Group Counseling" (2.16.840.1.113883.3.464.1003.101.12.1027)
- "Encounter, Performed: Preventive Care Services Individual Counseling" using "Preventive Care Services Individual Counseling" (2.16.840.1.113883.3.464.1003.101.12.1026)
- "Encounter, Performed: Preventive Care Services, Initial Office Visit, 18 and Up" using "Preventive Care Services, Initial Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1023)
- "Encounter, Performed: Preventive Care, Established Office Visit, 0 to 17" using "Preventive Care, Established Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1022)
- "Encounter, Performed: Preventive Care Services, Initial Office Visit, 0 to 17" using "Preventive Care Services, Initial Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1024)
- "Encounter, Performed: Telephone Visits" using "Telephone Visits" (2.16.840.1.113883.3.464.1003.101.12.1080)
- "Encounter, Performed: Unlisted preventive medicine service" using "Unlisted preventive medicine service" (CPT Code 99429)
- "Intervention, Order: Hospice Care Ambulatory" using "Hospice Care Ambulatory" (2.16.840.1.113883.3.526.3.1584)
- "Intervention, Performed: Hospice Care Ambulatory" using "Hospice Care Ambulatory" (2.16.840.1.113883.3.526.3.1584)
- "Medication, Order: Antibiotic Medications for Upper Respiratory Infection" using "Antibiotic Medications for Upper Respiratory Infection" (2.16.840.1.113883.3.464.1003.1190)
- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity" (2.16.840.1.114222.4.11.3591)
- "Patient Characteristic Payer: Payer Type" using "Payer Type" (2.16.840.1.114222.4.11.3591)
- "Patient Characteristic Race: Race" using "Race" (2.16.840.1.114222.4.11.3591)
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex" (2.16.840.1.113762.1.4.1)

Supplemental Data Elements

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

Risk Adjustment Variables

None

Measure Set	None
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