

eCQM Title	Primary Caries Prevention Intervention as Offered by Dentists		
eCQM Identifier (Measure Authoring Tool)	74	eCQM Version Number	14.1.000
CBE Number	Not Applicable	GUID	0b81b6ba-3b30-41bf-a2f3-95bdc9f558f2
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	Centers for Medicare & Medicaid Services (CMS)		
Measure Developer	National Committee for Quality Assurance		
Endorsed By	None		
Description	Percentage of children, 1-20 years of age, who received two fluoride varnish applications during the measurement period as determined by a dentist		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	<p>Population 1: Patients age 1-5 years at the start of the Measurement Period</p> <p>Population 2: Patients age 6-12 years at the start of the Measurement Period</p> <p>Population 3: Patients age 13-20 years at the start of the Measurement Period</p>		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>The literature reflects that fluoride varnish, when applied to the teeth of high-risk children, reduces, in conjunction with anticipatory guidance provided to the caregiver, the risk of the child developing caries (Weyant et al., 2013). Evidence in the literature also specifically supports the effectiveness of professionally applied fluoride varnish at preventing caries in higher risk children (Chou et al., 2014).</p>		
Clinical Recommendation Statement	<p>The 2013 American Dental Association (ADA) clinical recommendations for use of professionally applied or prescription-strength, home-use topical fluorides for caries prevention in patients at elevated risk of developing caries:</p> <ul style="list-style-type: none"> <li>- Younger Than 6 Years - 2.26 percent fluoride varnish at least every three to six months.</li> <li>- 6-18 Years - 2.26 percent fluoride varnish at least every three to six months OR 1.23 percent fluoride (APF) gel for four minutes at least every three to six months.</li> <li>- Older Than 18 Years - 2.26 percent fluoride varnish at least every three to six months OR 1.23 percent fluoride (APF) gel for four minutes at least every three to six months (Weyant et al., 2013).</li> </ul> <p>The United States Preventive Services Taskforce (USPSTF) recommends the use of professionally applied fluoride varnish for the prevention of dental caries in high risk children under 5 years of age (Chou et al., 2014).</p>		
Improvement Notation	A higher score indicates better quality		
Reference	<p>Reference Type: CITATION</p> <p>Reference Text: Chou, R., Cantor, A., Zakher, B., Mitchell, J.P., Pappas, M. (2014) Prevention of Dental Caries in Children Younger Than 5 Years Old: Systematic Review to Update the U.S. Preventive Services Task Force Recommendation. Agency for Health Research and Quality (US), Report No.: 12-05170-EF-1.</p>		
Reference	<p>Reference Type: CITATION</p> <p>Reference Text: Weyant, R. J., Tracy, S. L., Anselmo, T. (Tracy), Beltrán-Aguilar, E. D., Donly, K. J., Frese, W. A., Hujuel, P. P., Iafolla, T., Kohn, W., Kumar, J., Levy, S. M., Tinanoff, N., Wright, J. T., Zero, D., Aravamudhan, K., Frantsve-Hawley, J., &amp; Meyer, D. M. (2013). Topical Fluoride for Caries Prevention. The Journal of the American Dental Association, 144(11), 1279–1291. <a href="https://doi.org/10.14219/jada.archive.2013.0057">https://doi.org/10.14219/jada.archive.2013.0057</a></p>		
Definition	None		
Guidance	<p>This eCQM is a patient-based measure.</p> <p>Telehealth encounters are not eligible for this measure because the measure does not contain telehealth-eligible codes and requires a clinical action that cannot be conducted via telehealth.</p> <p>This version of the eCQM uses QDM version 5.6. Please refer to the eCQI resource center (<a href="https://ecqi.healthit.gov/qdm">https://ecqi.healthit.gov/qdm</a>) for more information on the QDM.</p>		
Transmission Format	TBD		
Initial Population	Children, 1-20 years of age at the start of the measurement period, with a clinical oral evaluation by a dentist during the measurement period		
Denominator	Equals Initial Population		
Denominator Exclusions	Exclude patients who are in hospice care for any part of the measurement period		
Numerator	Children who receive two fluoride varnish applications on different days during the measurement period		
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

AgeInYearsAt(date from start of "Measurement Period") in Interval[1, 20] and exists ("Qualifying Encounters")

### Denominator

"Initial Population"

### Denominator Exclusions

Hospice."Has Hospice Services"

### Numerator

Count(["Procedure, Performed": "Fluoride Varnish Application for Children"] FluorideApplication where Global."NormalizeInterval"(FluorideApplication.relevantDatetime, FluorideApplication.relevantPeriod) ends during day of "Measurement Period" return distinct date from end of Global."NormalizeInterval"(FluorideApplication.relevantDatetime, FluorideApplication.relevantPeriod) ) >= 2

### Numerator Exclusions

None

### Denominator Exceptions

None

### Stratification 1

AgeInYearsAt(date from start of "Measurement Period") in Interval[1, 5]

### Stratification 2

AgeInYearsAt(date from start of "Measurement Period") in Interval[6, 12]

### Stratification 3

AgeInYearsAt(date from start of "Measurement Period") in Interval[13, 20]

## Definitions

### Denominator

"Initial Population"

### Denominator Exclusions

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."NormalizeInterval" ( 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."NormalizeInterval" ( 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

AgeInYearsAt(date from start of "Measurement Period") in Interval[1, 20] and exists ("Qualifying Encounters")

### Numerator

Count(["Procedure, Performed": "Fluoride Varnish Application for Children"] FluorideApplication where Global."NormalizeInterval"(FluorideApplication.relevantDatetime, FluorideApplication.relevantPeriod) ends during day of "Measurement Period" return distinct date from end of Global."NormalizeInterval"(FluorideApplication.relevantDatetime, FluorideApplication.relevantPeriod) ) >= 2

### Qualifying Encounters

["Encounter, Performed": "Clinical Oral Evaluation"] ValidEncounter where ValidEncounter.relevantPeriod during day of "Measurement Period"

### 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

AgeInYearsAt(date from start of "Measurement Period") in Interval[1, 5]

### Stratification 2

AgeInYearsAt(date from start of "Measurement Period") in Interval[6, 12]

### Stratification 3

AgeInYearsAt(date from start of "Measurement Period") in Interval[13, 20]

## Functions

### Global.NormalizeInterval(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>

## Terminology

- code "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]" ("LOINC Code (45755-6)")
- code "Yes (qualifier value)" ("SNOMEDCT Code (373066001)")
- valueSet "Clinical Oral Evaluation" (2.16.840.1.113883.3.464.1003.125.12.1003)
- valueSet "Encounter Inpatient" (2.16.840.1.113883.3.666.5.307)
- valueSet "Ethnicity" (2.16.840.1.114222.4.11.837)
- valueSet "Fluoride Varnish Application for Children" (2.16.840.1.113883.3.464.1003.125.12.1002)
- 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 "ONC Administrative Sex" (2.16.840.1.113762.1.4.1)
- valueSet "Payer Type" (2.16.840.1.114222.4.11.3591)
- valueSet "Race" (2.16.840.1.114222.4.11.836)

## Data Criteria (QDM Data Elements)

- "Assessment, Performed: Hospice care [Minimum Data Set]" using "Hospice care [Minimum Data Set]" (LOINC Code 45755-6)"
- "Diagnosis: Hospice Diagnosis" using "Hospice Diagnosis (2.16.840.1.113883.3.464.1003.1165)"
- "Encounter, Performed: Clinical Oral Evaluation" using "Clinical Oral Evaluation (2.16.840.1.113883.3.464.1003.125.12.1003)"
- "Encounter, Performed: Encounter Inpatient" using "Encounter Inpatient (2.16.840.1.113883.3.666.5.307)"
- "Encounter, Performed: Hospice Encounter" using "Hospice Encounter (2.16.840.1.113883.3.464.1003.1003)"
- "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)"
- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer Type" using "Payer Type (2.16.840.1.114222.4.11.3591)"
- "Patient Characteristic Race: Race" using "Race (2.16.840.1.114222.4.11.836)"
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex (2.16.840.1.113762.1.4.1)"
- "Procedure, Performed: Fluoride Varnish Application for Children" using "Fluoride Varnish Application for Children (2.16.840.1.113883.3.464.1003.125.12.1002)"

## 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	Not Applicable
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