

eCQM Title	Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents		
eCQM Identifier (Measure Authoring Tool)	155	eCQM Version number	7.2.000
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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	National Quality Forum		
Description	<p>Percentage of patients 3-17 years of age who had an outpatient visit with a Primary Care Physician (PCP) or Obstetrician/Gynecologist (OB/GYN) and who had evidence of the following during the measurement period. Three rates are reported.</p> <ul style="list-style-type: none"> <li>- Percentage of patients with height, weight, and body mass index (BMI) percentile documentation</li> <li>- Percentage of patients with counseling for nutrition</li> <li>- Percentage of patients with counseling for physical activity</li> </ul>		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	<p>Report a total score, and each of the following strata:</p> <p>Stratum 1 - Patients age 3-11</p> <p>Stratum 2 - Patients age 12-17</p>		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>One of the most important developments in pediatrics in the past two decades has been the emergence of a new chronic disease: obesity in childhood and adolescence. The rapidly increasing prevalence of obesity among children is one of the most challenging dilemmas currently facing pediatricians. National Health and Nutrition Examination Survey (NHANES) data from Cycle II (1976-1980) compared with data from Cycle III (1988-1994) documents an increase in the prevalence of obesity in all age, ethnic, and gender groups. NHANES data collected from 1999-2000 revealed a continued increase in the number of obese children. In that data collection, the prevalence of obesity (body mass index (BMI) &gt; 95th percentile) was 10 percent among children 2-5 years of age and 15 percent among children 6-19 years of age. When children at risk for obesity (BMI of 85th-94th percentile) were included, the prevalence increased to 20 percent and 30 percent, respectively. Therefore, &gt;1 of every 4 patients examined by pediatricians either is obese or is considered to be at high risk for developing this challenging health problem (O'Brien et al. 2004).</p> <p>In addition to the growing prevalence of obesity in children and adolescents, the number of overweight children at risk of becoming obese is also of great concern. Evidence suggests that overweight children and adolescents are more likely to become obese as adults. For example, one study found that approximately 80 percent of children who were overweight at age 10-15 years were obese adults at age 25 years (Whitaker et al. 1997). Another study found that 25 percent of obese adults were overweight as children. The latter study also found that if overweight begins before 8 years of age, obesity in adulthood is likely to be more severe (Freedman et al. 2001).</p>		
Clinical Recommendation Statement	<p>U.S. Preventive Services Task Force (USPSTF) (2017) - The USPSTF recommends that clinicians screen for obesity in children and adolescents 6 years and older and offer or refer them to comprehensive, intensive behavioral interventions to promote improvements in weight status. (B recommendation)</p> <p>American Academy of Pediatrics (2004) - BMI should be calculated from the height and weight, and the BMI percentile should be calculated.</p> <p>American Medical Association (AMA), Centers for Disease Control and Prevention (CDC), Health Resources and Services Administration (HRSA) (2007) - At minimum, a yearly assessment of weight status in all children.</p> <p>Include calculation of height, weight (measured appropriately), and body mass index (BMI) for age and plotting of those measures on standard growth charts.</p> <p>The AAP and the American College of Clinical Endocrinology (ACCE) (Dorsey 2005) - Screen children for obesity using BMI and examine overweight children for obesity-related diseases.</p> <p>CDC (Baker 2005) - Using the percentile BMI for age and sex as the most appropriate and easily available method to screen for childhood overweight or at risk for overweight.</p> <p>Bright Futures (AAP) (Hagan 2008) - Calculate BMI at every visit.</p>		
Improvement Notation	Higher score indicates better quality		
Reference	O'Brien, S.H., R. Holubkov, E.C Reis. 2004. "Identification, evaluation, and management of obesity in an academic primary care center." Pediatrics 111:154-159.		
Reference	Whitaker, R.C., J.A. Wright, M.S. Pepe, K.D. Seidel, W.H. Dietz. 1997. "Predicting obesity in young adulthood from childhood and parental obesity." N Engl J Med 37(13):869-873.		
Reference	Freedman, D.S., L.K. Khan, W.H. Dietz, S.R. Srinivasan, G.S. Berenson. 2001. "Relationship of childhood overweight to coronary heart disease risk factors in adulthood: The Bogalusa Heart Study." Pediatrics 108:712-718.		
Reference	U.S. Preventive Services Task Force (USPSTF). 2017. Screening and interventions for overweight in children and adolescents: recommendation statement. Rockville: Agency for Healthcare Research and Quality (AHRQ).		
Reference	[AAP] National High Blood Pressure Education Program Working Group on High Blood Pressure in Children. 2004. "The fourth report on the diagnosis, evaluation, and treatment of high blood pressure in children and adolescents." Pediatrics 114(2 Suppl):555-76.		
Reference	AMA/HRSA/CDC Expert Committee on the Assessment, Prevention and Treatment of Child and Adolescent Overweight and Obesity. 2007. Recommendations on the assessment, prevention and treatment of child and adolescent overweight and obesity. Chicago: AMA.		
Reference	Dorsey, K.B., C. Wells, H.M. Krumholz, J.C. Concato. 2005. "Diagnosis, evaluation, and treatment of childhood obesity in pediatric practice." Arch Pediatr Adolesc Med 159:632-638.		
Reference	Baker, S., S. Barlow, W. Cochran, G. Fuchs, W. Klish, N. Krebs, R. Strauss, A. Tershakovec, J. Udall. 2005. "Overweight children and adolescents: a clinical report of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition." J Pediatr Gastroenterol Nutr 40(5):533-43.		
Reference	Hagan, J.F., Shaw J.S., Duncan P.M. eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove: American Academy of Pediatrics.		
Definition	None		
Guidance	<p>The visit must be performed by a PCP or OB/GYN.</p> <p>Because BMI norms for youth vary with age and sex, this measure evaluates whether BMI percentile is assessed rather than an</p>		

	absolute BMI value.
Transmission Format	TBD
Initial Population	Patients 3-17 years of age with at least one outpatient visit with a primary care physician (PCP) or an obstetrician/gynecologist (OB/GYN) during the measurement period
Denominator	Equals Initial Population
Denominator Exclusions	Patients who have a diagnosis of pregnancy during the measurement period. Exclude patients whose hospice care overlaps the measurement period.
Numerator	Numerator 1: Patients who had a height, weight and body mass index (BMI) percentile recorded during the measurement period Numerator 2: Patients who had counseling for nutrition during the measurement period Numerator 3: Patients who had counseling for physical activity 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

### Population Criteria 1

#### Initial Population

exists ["Patient Characteristic Birthdate"] BirthDate  
where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")in Interval[3, 17)  
and exists ("Qualifying Encounter")

#### Denominator

"Initial Population"

#### Denominator Exclusions

Hospice."Has Hospice"  
or exists ("Pregnancy Diagnosis Which Overlaps Measurement Period")

#### Numerator

exists ("BMI Percentile in Measurement Period")  
and exists ("Height in Measurement Period")  
and exists ("Weight in Measurement Period")

#### Numerator Exclusions

None

#### Denominator Exceptions

None

#### Stratification 1

exists ["Patient Characteristic Birthdate"] BirthDate  
where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 3  
and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 11

#### Stratification 2

exists ["Patient Characteristic Birthdate"] BirthDate  
where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 11  
and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 17

### Population Criteria 2

#### Initial Population

exists ["Patient Characteristic Birthdate"] BirthDate  
where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")in Interval[3, 17)  
and exists ("Qualifying Encounter")

#### Denominator

"Initial Population"

#### Denominator Exclusions

Hospice."Has Hospice"  
or exists ("Pregnancy Diagnosis Which Overlaps Measurement Period")

#### Numerator

exists ["Intervention, Performed": "Counseling for Nutrition"] NutritionCounseling  
where NutritionCounseling.relevantPeriod during "Measurement Period"

#### Numerator Exclusions

None

#### Denominator Exceptions

None

#### Stratification 1

exists ["Patient Characteristic Birthdate"] BirthDate  
where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 3  
and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 11

#### Stratification 2

exists ["Patient Characteristic Birthdate"] BirthDate  
where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 11  
and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 17

### Population Criteria 3

#### Initial Population

exists ["Patient Characteristic Birthdate"] BirthDate  
 where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")in Interval[3, 17)  
 and exists ("Qualifying Encounter")

#### Denominator

"Initial Population"

#### Denominator Exclusions

Hospice."Has Hospice"  
 or exists ("Pregnancy Diagnosis Which Overlaps Measurement Period")

#### Numerator

exists ["Intervention, Performed": "Counseling for Physical Activity"] ActivityCounseling  
 where ActivityCounseling.relevantPeriod during "Measurement Period"

#### Numerator Exclusions

None

#### Denominator Exceptions

None

#### Stratification 1

exists ["Patient Characteristic Birthdate"] BirthDate  
 where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 3  
 and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 11

#### Stratification 2

exists ["Patient Characteristic Birthdate"] BirthDate  
 where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 11  
 and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 17

## Definitions

### BMI Percentile in Measurement Period

["Physical Exam, Performed": "BMI percentile"] BMI  
 where BMI.relevantPeriod during "Measurement Period"  
 and BMI.result is not null

#### Denominator

"Initial Population"

#### Denominator Exclusions

Hospice."Has Hospice"  
 or exists ("Pregnancy Diagnosis Which Overlaps Measurement Period")

### Height in Measurement Period

["Physical Exam, Performed": "Height"] Height  
 where Height.relevantPeriod during "Measurement Period"  
 and Height.result is not null

### Hospice.Has Hospice

exists ( ["Encounter, Performed": "Encounter Inpatient"] DischargeHospice  
 where ( DischargeHospice.dischargeDisposition as Code = "Discharge to home for hospice care (procedure)"  
 or DischargeHospice.dischargeDisposition as Code = "Discharge to healthcare facility for hospice care (procedure)"  
 )  
 and DischargeHospice.relevantPeriod ends during "Measurement Period"  
 )  
 or exists ( ["Intervention, Order": "Hospice care ambulatory"] HospiceOrder  
 where HospiceOrder.authorDatetime during "Measurement Period"  
 )  
 or exists ( ["Intervention, Performed": "Hospice care ambulatory"] HospicePerformed  
 where HospicePerformed.relevantPeriod overlaps "Measurement Period"  
 )

#### Initial Population

exists ["Patient Characteristic Birthdate"] BirthDate  
 where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")in Interval[3, 17)  
 and exists ("Qualifying Encounter")

#### Numerator 1

exists ("BMI Percentile in Measurement Period")  
 and exists ("Height in Measurement Period")  
 and exists ("Weight in Measurement Period")

#### Numerator 2

exists ["Intervention, Performed": "Counseling for Nutrition"] NutritionCounseling  
 where NutritionCounseling.relevantPeriod during "Measurement Period"

#### Numerator 3

exists ["Intervention, Performed": "Counseling for Physical Activity"] ActivityCounseling  
 where ActivityCounseling.relevantPeriod during "Measurement Period"

### Pregnancy Diagnosis Which Overlaps Measurement Period

["Diagnosis": "Pregnancy"] Pregnancy  
 where Pregnancy.prevalencePeriod overlaps "Measurement Period"

### Qualifying Encounter

( ["Encounter, Performed": "Office Visit"]  
 union ["Encounter, Performed": "Preventive Care Services-Individual Counseling"]  
 union ["Encounter, Performed": "Preventive Care - Established Office Visit, 0 to 17"]  
 union ["Encounter, Performed": "Preventive Care- Initial Office Visit, 0 to 17"]  
 union ["Encounter, Performed": "Preventive Care Services - Group Counseling"]  
 union ["Encounter, Performed": "Home Healthcare Services"]) ValidEncounter  
 where ValidEncounter.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"]

▲ Stratification 1

exists ["Patient Characteristic Birthdate"] BirthDate  
 where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 3  
 and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 11

▲ Stratification 2

exists ["Patient Characteristic Birthdate"] BirthDate  
 where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 11  
 and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 17

▲ Weight in Measurement Period

["Physical Exam, Performed": "Weight"] Weight  
 where Weight.relevantPeriod during "Measurement Period"  
 and Weight.result is not null

Functions

▲ Global.CalendarAgeInYearsAt(BirthDate Time 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 "Discharge to healthcare facility for hospice care (procedure)" using "SNOMEDCT version 2017-09 Code (428371000124100)"
- code "Discharge to home for hospice care (procedure)" using "SNOMEDCT version 2017-09 Code (428361000124107)"
- valueset "BMI percentile" using "2.16.840.1.113883.3.464.1003.121.12.1012"
- valueset "Counseling for Nutrition" using "2.16.840.1.113883.3.464.1003.195.12.1003"
- valueset "Counseling for Physical Activity" using "2.16.840.1.113883.3.464.1003.118.12.1035"
- valueset "Encounter Inpatient" using "2.16.840.1.113883.3.666.5.307"
- valueset "Ethnicity" using "2.16.840.1.114222.4.11.837"
- valueset "Height" using "2.16.840.1.113883.3.464.1003.121.12.1014"
- valueset "Home Healthcare Services" using "2.16.840.1.113883.3.464.1003.101.12.1016"
- valueset "Hospice care ambulatory" using "2.16.840.1.113762.1.4.1108.15"
- valueset "Office Visit" using "2.16.840.1.113883.3.464.1003.101.12.1001"
- 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 "Pregnancy" using "2.16.840.1.113883.3.526.3.378"
- valueset "Preventive Care - Established Office Visit, 0 to 17" using "2.16.840.1.113883.3.464.1003.101.12.1024"
- valueset "Preventive Care Services - Group Counseling" using "2.16.840.1.113883.3.464.1003.101.12.1027"
- valueset "Preventive Care Services-Individual Counseling" using "2.16.840.1.113883.3.464.1003.101.12.1026"
- valueset "Preventive Care- Initial Office Visit, 0 to 17" using "2.16.840.1.113883.3.464.1003.101.12.1022"
- valueset "Race" using "2.16.840.1.114222.4.11.836"
- valueset "Weight" using "2.16.840.1.113883.3.464.1003.121.12.1015"

Data Criteria (QDM Data Elements)

- "Diagnosis: Pregnancy" using "Pregnancy (2.16.840.1.113883.3.526.3.378)"
- "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: Office Visit" using "Office Visit (2.16.840.1.113883.3.464.1003.101.12.1001)"
- "Encounter, Performed: Preventive Care - Established Office Visit, 0 to 17" using "Preventive Care - Established Office Visit, 0 to 17 (2.16.840.1.113883.3.464.1003.101.12.1024)"
- "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- Initial Office Visit, 0 to 17" using "Preventive Care- Initial Office Visit, 0 to 17 (2.16.840.1.113883.3.464.1003.101.12.1022)"
- "Intervention, Order: Hospice care ambulatory" using "Hospice care ambulatory (2.16.840.1.113762.1.4.1108.15)"
- "Intervention, Performed: Counseling for Nutrition" using "Counseling for Nutrition (2.16.840.1.113883.3.464.1003.195.12.1003)"
- "Intervention, Performed: Counseling for Physical Activity" using "Counseling for Physical Activity (2.16.840.1.113883.3.464.1003.118.12.1035)"
- "Intervention, Performed: Hospice care ambulatory" using "Hospice care ambulatory (2.16.840.1.113762.1.4.1108.15)"
- "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)"
- "Physical Exam, Performed: BMI percentile" using "BMI percentile (2.16.840.1.113883.3.464.1003.121.12.1012)"
- "Physical Exam, Performed: Height" using "Height (2.16.840.1.113883.3.464.1003.121.12.1014)"
- "Physical Exam, Performed: Weight" using "Weight (2.16.840.1.113883.3.464.1003.121.12.1015)"

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	None
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