

NQF Endorsement Measurement Submission Summary Materials

***NQF Measure #3039 and #2828
Preventive Care and Screening:
Body Mass Index (BMI) Screening and Follow-Up Plan***

***A special project for the Centers for Medicare & Medicaid Services (CMS)
and the National Quality Forum (NQF)***

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I. 2014 Physician Quality Reporting System Specifications

Measure #128 (NQF 0421): Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up

2014 PHYSICIAN QUALITY REPORTING OPTIONS FOR INDIVIDUAL MEASURES: CLAIMS, REGISTRY

DESCRIPTION:

Percentage of patients aged 18 years and older with a documented BMI during the current encounter or during the previous six months AND when the BMI is **outside of normal parameters**, a follow-up plan is documented during the encounter or during the previous six months of the encounter.

Normal Parameters: Age 65 years and older BMI ≥ 23 and < 30
Age 18 – 64 years BMI ≥ 18.5 and < 25

INSTRUCTIONS:

This measure is to be reported a minimum of **once per reporting period** for patients seen during the reporting period. *The most recent quality code submitted will be used for performance calculation.* There is no diagnosis associated with this measure. This measure may be reported by eligible professionals who perform the quality actions described in the measure based on the services provided at the time of the qualifying visit and the measure-specific denominator coding. The BMI documented in the medical record may be reported if done in the provider's office/facility or if a BMI is documented within the previous six months in outside medical records obtained by the provider. If the most recent documented BMI is outside of normal parameters, then a follow-up plan must be documented within six months of the abnormal BMI. The documented follow-up interventions must be related to the BMI outside of normal parameters, example: "Patient referred to nutrition counseling for BMI above normal parameters".

Measure Reporting via Claims:

CPT codes or HCPCS codes, and patient demographics are used to identify patients who are included in the measure's denominator. Quality-data codes are used to report the numerator of the measure.

When reporting the measure via claims, submit the listed CPT or HCPCS codes, and the appropriate numerator quality-data code. All measure-specific coding should be reported on the claim(s) representing the eligible encounter.

Measure Reporting via Registry:

CPT codes or HCPCS codes, and patient demographics are used to identify patients who are included in the measure's denominator. The listed numerator options are used to report the numerator of the measure.

The quality-data codes listed do not need to be submitted for registry-based submissions; however, these codes may be submitted for those registries that utilize claims data.

DENOMINATOR:

All patients aged 18 years and older

Denominator Criteria (Eligible Cases):

Patients aged ≥ 18 years on date of encounter

AND

Patient encounter during the reporting period (CPT or HCPCS): 90791, 90792, 90832, 90834, 90837, 90839, 96150, 96151, 96152, 97001, 97003, 97802, 97803, 98960, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, D7140, D7210, G0101, G0108, G0270, G0271, G0402, G0438, G0439, G0447

NUMERATOR:

Patients with a documented BMI during the encounter or during the previous six months, AND when the BMI is outside of normal parameters, follow-up is documented during the encounter or during the previous six months of the encounter with the BMI outside of normal parameters

Numerator Instructions: An eligible professional or their staff is required to measure both height and weight. Both the height and the weight must be measured within the same six months. Self-reported values cannot be used. The documentation of a follow-up plan must be based on the most recent documented BMI within the previous six months

Definitions:

BMI – Body mass index (BMI), is a number calculated using the Quetelet index: weight divided by height squared (W/H^2) and is commonly used to classify weight categories. BMI can be calculated using:

Metric Units: $BMI = \text{Weight (kg)} / (\text{Height (m)} \times \text{Height (m)})$

OR

English Units: $BMI = \text{Weight (lb)} / (\text{Height (in)} \times \text{Height (in)}) \times 703$

Follow-Up Plan – Proposed outline of treatment to be conducted as a result of a BMI out of normal parameters. A follow-up may include but is not limited to: documentation education, a referral (e.g., a registered dietitian, nutritionist, occupational therapist, physical therapist, primary care provider, exercise physiologist, mental health professional, or surgeon), pharmacological interventions, dietary supplements, exercise counseling, or nutrition counseling.

Not Eligible for BMI Calculation or Follow-Up Plan – A patient is not eligible if one or more of the following reasons are documented:

- Patient is receiving palliative care
- Patient is pregnant
- Patient refuses BMI measurement (refuses height and/or weight)
- Any other reason documented in the medical record by the provider why BMI calculation or follow-up plan was not appropriate
- 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

Numerator Quality-Data Coding Options for Reporting Satisfactorily:**BMI Documented as Normal, No Follow-Up Plan Required**

(One quality-data code [G8417, G8418 or G8420] is required on the claim form to submit this numerator option)

G8420: BMI is documented within normal parameters and no follow-up plan is required

OR

BMI Documented as Above Normal Parameters, AND Follow-Up Documented

G8417: BMI is documented above normal parameters and a follow-up plan is documented

OR

BMI Documented as Below Normal Parameters, AND Follow-Up Documented

G8418: BMI is documented below normal parameters and a follow-up plan is documented

OR

BMI not Documented, Patient not Eligible

(One quality-data code [G8422 or G8938] is required on the claim form to submit this numerator option)

G8422: BMI not documented, documentation the patient is not eligible for BMI calculation

OR

BMI Documented Outside of Normal Limits, Follow-up Plan not Documented, Patient not Eligible

G8938: BMI is documented as being outside of normal limits, follow-up plan is not documented, documentation the patient is not eligible

OR

BMI not Documented, Reason not Given

(One quality-data code [G8419 or G8421] is required on the claim form to submit this numerator option)

G8421: BMI not documented and no reason is given

OR

BMI Documented Outside of Normal Parameters, Follow-Up Plan not Documented, Reason not Given

G8419: BMI documented outside normal parameters, no follow-up plan documented, no reason given

RATIONALE:**BMI Above Upper Parameters**

Obesity continues to be a costly public health concern in the United States. The Centers for Disease Control and Prevention (CDC) reported that in 2009, no state met the Healthy People 2010 obesity target of 15 percent and the self reported overall prevalence of obesity among adults had increased 1.1 percentage points in 2007 to 26.7 percent (2010). Flegal, Carroll, Kit and Ogden (2012) reported the prevalence of BMI-defined obesity in adults is high and continues to exceed 30% in most sex-age groups. In addition to the continued high prevalence rate for adults in general, there has been a significant increase for men and for non-Hispanic black and Mexican American women over the 12-year period from 1999 through 2010 (2012). Moyer (2012) reported: Obesity is associated with such health problems as an increased risk for coronary artery disease, type 2 diabetes, various types of cancer, gallstones and disability. These comorbid medical conditions are associated with higher use of health care services and costs among obese patients (p. 373).

Obesity is also associated with an increased risk of death, particularly in adults younger than age 65 years and has been shown to reduce life expectancy by 6 to 20 years depending on age and race (LeBlanc et al., 2011).

Finkelstein, Trogdon, Cohen and Dietz (2009) found that in 2006, across all payers, per capita medical spending for the obese is \$1,429 higher per year, (42 percent) than for someone of normal weight. Using 2008 dollars, this was estimated to be equivalent to \$147 billion dollars in medical care costs related to obesity.

In addition to a high prevalence rate of obesity, less than 50% of obese adults in 2010 received advice to exercise or perform physical activity (Barnes & Schoenborn, 2012).

BMI Below Normal Parameters

In the National Center for Health Statistics Health E-Stat, Fryer and Ogden reported that poor nutrition or underlying health conditions can result in underweight. Results from the 2007-2010 National Health and Nutrition Examination Survey (NHANE), using measured heights and weights, indicate an estimated 1.7% of U.S. adults are underweight with women more likely to be underweight than men (2012).

Ranhoff, Gjoen and Mowe (2005) recommended using BMI < 23 for the elderly to identify positive results with malnutrition screens and poor nutritional status.

CLINICAL RECOMMENDATION STATEMENTS:

Although multiple clinical recommendations addressing obesity have been developed by professional organizations, societies and associations, two recommendations have been identified which exemplify the intent of the measure and address the numerator and denominator.

The US Preventive Health Services Task Force (USPSTF) recommends screening all adults (aged 18 years and older) for obesity. Clinicians should offer or refer patients with a BMI of 30 or higher to intensive, multicomponent behavioral interventions. This is a B recommendation (Moyer, 2012)

As cited in Wilkinson et al. (2012), Institute for Clinical Systems Improvement (ICSI) *Preventive Services for Adults, Obesity Screening* (Level II) Recommendation provides the following guidance:

- Record height, weight and calculate body mass index at least annually
- A BMI greater or equal to 30 is defined as obese
- A BMI of 25-29 is defined as overweight
- Intensive intervention for obese individuals, based on BMI, is recommended by the U.S. Preventive Services to help control weight.

II. 2014 eMeasure Specification

eMeasure Title	Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up		
eMeasure Identifier (Measure Authoring Tool)	69	eMeasure Version number	2
NQF Number	0421	GUID	9a031bb8-3d9b-11e1-8634-00237d5bf174
Measurement Period	January 1, 20xx through December 31, 20xx		
Measure Steward	Centers for Medicare & Medicaid Services		
Measure Developer	Quality Insights of Pennsylvania		
Endorsed By	National Quality Forum		
Description	<p>Percentage of patients aged 18 years and older with a documented BMI during the encounter or during the previous six months, AND when the BMI is outside of normal parameters, a follow-up plan is documented during the encounter or during the previous six months of the encounter</p> <p>Normal Parameters: Age 65 years and older BMI => 23 and < 30</p> <p> Age 18 – 64 years BMI => 18.5 and < 25</p>		
Copyright	<p>Limited proprietary coding is contained in the measure specifications for convenience. Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. Quality Insights of Pennsylvania disclaims all liability for use or accuracy of any Current Procedural Terminology (CPT [R]) or other coding contained in the specifications.</p> <p>CPT (R) contained in the Measure specifications is copyright 2007-2011 American Medical Association.</p> <p>LOINC (R) copyright 2004-2011 Regenstrief Institute, Inc. This material contains SNOMED Clinical Terms (R) (SNOMED CT [R]) copyright 2004-2011 International Health Terminology Standards Development Organization. All Rights Reserved.</p> <p>Due to technical limitations, registered trademarks are indicated by (R) or [R] and unregistered trademarks are indicated by (TM) or [TM].</p>		
Disclaimer	<p>These performance measures are not clinical guidelines and do not establish a standard of medical care, and have not been tested for all potential applications.</p> <p>THE MEASURES AND SPECIFICATIONS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND.</p>		
Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>Rationale BMI Above Upper Parameters</p> <p>Obesity continues to be a costly public health concern in the United States. The Centers for Disease Control and Prevention (CDC, 2010) reported that in 2009, no state met the Healthy People 2010 obesity target of 15 percent and the self reported overall prevalence of obesity among adults had increased 1.1 percentage points in 2007 to 26.7 percent. Flegal, Carroll, Kit & Ogden (2012) reported the prevalence of BMI-defined obesity in adults is high and continues to exceed 30% in most sex-age groups. In addition to the continued high prevalence rate for adults in general, there has been a significant increase for men and for non-Hispanic black and Mexican American women over the 12-year period from 1999 through 2010. Moyer (2012) reported: .Obesity is associated with such health problems as an increased risk for coronary artery disease, type 2 diabetes, various types of cancer, gallstones and disability. These comorbid medical conditions are associated with higher use of health care services and costs among obese patients (p. 373).</p> <p>Obesity is also associated with an increased risk of death, particularly in adults younger than age 65 years and has</p>		

	<p>been shown to reduce life expectancy by 6 to 20 years depending on age and race (LeBlanc et al., 2011).</p> <p>Finkelstein, Trogon, Cohen and Dietz (2009) found that in 2006, across all payers, per capita medical spending for the obese is \$1,429 higher per year (42 percent) than for someone of normal weight. Using 2008 dollars, this was estimated to be equivalent to \$147 billion dollars in medical care costs related to obesity.</p> <p>In addition to a high prevalence rate of obesity, less than 50% of obese adults in 2010 received advice to exercise or perform physical activity (Barnes & Schoenborn, 2012).</p> <p>BMI Below Normal Parameters</p> <p>In the National Center of Health Statistics (NCHS) Health E-Stat, Fryer & Ogden (2012) reported that poor nutrition or underlying health conditions can result in underweight. Results from the 2007-2010 National Health and Nutrition Examination Survey (NHANES), using measured heights and weights, indicate an estimated 1.7% of U.S. adults are underweight with women more likely to be underweight than men. (as c</p> <p>Ranchoff, Gjoen & Mowe (2005) recommended using BMI < 23 for the elderly to identify positive results with malnutrition screens and poor nutritional status</p>
Clinical Recommendation Statement	<p>Although multiple clinical recommendations addressing obesity have been developed by professional organizations, societies and associations, two recommendations have been identified which exemplify the intent of the measure and address the numerator and denominator.</p> <p>The US Preventive Health Services Task Force (USPSTF) recommends that clinicians screen all adult (aged 18 years and older) for obesity. Clinicians should offer or refer patients with a BMI of 30 or higher to intensive, multicomponent behavioral interventions. This is a B recommendation (Moyer, 2012).</p> <p>As cited in Wilkinson et al. (2012), the Institute for Clinical Systems Improvement (ICSI,) Preventive Services for Adults, Obesity Screening (Level II) Recommendation provides the following guidance</p> <ul style="list-style-type: none"> -Record height, weight and calculate body mass index at least annually -A BMI greater or equal to 30 is defined as obese -A BMI of 25-29 is defined as overweight -Intensive intervention for obese individuals, based on BMI, is recommended by the U.S. Preventive Services to help control weight
Improvement Notation	Higher score indicates better quality
Reference	Reference Centers for Disease Control and Prevention (CDC). (2010). Vital Signs: State-specific obesity prevalence among adults, - United States, 2009. Morbidity and mortality weekly report, 59. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm59e0803a1.htm
Reference	Flegal, K. M., Carroll, M. D., Kit, B. K., Ogden, C. L. (2012). Prevalence of obesity and trends in the distribution of body mass index among U. S. adults, 1999-2010. JAMA, 307(5), 491-497.
Reference	Moyer, V. A. (2012). Screening for and management of obesity in adults: U.S. Preventive Services Task Force Recommendation Statement. Annals of Internal Medicine, 157, 373-378.
Reference	Fryar, C. D., & Ogden, C. L. (2012). Prevalence of underweight among adults aged 20 and over: United States, 1960-1962 through 2007-2010. National Center for Health Statistics, Division of Health and Nutrition Examination Surveys. Retrieved from http://www.cdc.gov/nchs/data/hestat/underweight_adult_07_10/underweight_adult_07_10.pdf
Reference	Finkelstein, E.A., Trogon, J.G., Cohen, J.W., & Dietz, W. (2009). Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates. Health Affairs, 28(5), w822-w831. doi: 10.1377/hlthaff.28.5.w822
Reference	Wilkinson, J., Bass, C., Diem, S., Gravley, A., Harvey, L., Hayes, R., Johnson, K., Maciosek, M., McKeon, K., Milteer, L., Morgan, J., Rothe, P., Snellman, L., Solberg, L., Storlie, C., & Vincent, P. (2012). Institute for Clinical Systems Improvement. Preventive Services for Adults. Retrieved from http://bit.ly.PrevServAdults0912 .
Reference	LeBlanc, E., O'Connor, E., Whitlock, E.P., Patnode, C., & Kapka T. (2011). Screening for and Management of Obesity and Overweight in Adults. AHRQ Publication No. 11-05159- EF-1, Evidence Synthesis Number 89. Retrieved from http://www.uspreventiveservicestaskforce.org/uspstf11/obeseadult/obesees.pdf
Reference	Barnes PM, Schoenborn CA (2012). Trends in adults receiving a recommendation for exercise or other physical activity from a physician or other health professional. Centers for Disease Control and Prevention (CDC), National Center for

	Health Statistics (NCHS) Data Brief, No. 86: Feb 2012.
Definition	<p>BMI- Body mass index (BMI) -is a number calculated using the Quetelet index: weight divided by height squared (W/H²) and is commonly used to classify weight categories. BMI can be calculated using:</p> <p>Metric Units: BMI = Weight (kg) / (Height (m) x Height (m)) OR</p> <p>English Units: BMI = Weight (lb) / (Height (in) x Height (in)) x 703</p> <p>Follow-Up Plan – Proposed outline of treatment to be conducted as a result of a BMI out of normal parameters. A follow-up may include, but is not limited to: documentation of education, referral (e.g. a registered dietician, nutritionist, occupational therapist, physical therapist, primary care provider, exercise physiologist, mental health professional, or surgeon), pharmacological interventions, dietary supplements, exercise counseling or nutrition</p>
Guidance	There is no diagnosis associated with this measure. This measure may be reported by eligible professionals who perform the quality actions described in the measure based on the services provided at the time of the qualifying visit and the measure-specific denominator coding. The BMI documented in the medical record may be reported if done in the provider's office/facility or if a BMI is documented within the previous six months in outside medical records obtained by the provider. If the most recent documented BMI is outside of normal parameters, then a follow-up plan must be documented within six months of the abnormal BMI. An eligible professional or their staff is required to measure both height and weight. Both height and weight must be obtained within the same six months. Self-reported values cannot be used. The documented follow-up interventions must be related to the BMI outside of normal parameters, example: "Patient referred to nutrition counseling for BMI above normal parameters".
Transmission Format	TBD
Initial Patient Population	<p>There are two (2) Initial Patient Populations for this measure NOTE: The most recent quality code submitted will be used for performance calculation.</p> <p>Initial Patient Population 1: All patients 65 years of age and older before the beginning of the measurement period with at least one eligible encounter during the measurement period NOT INCLUDING encounters where the patient is receiving palliative care, refuses measurement of height and/or weight, the 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, or there is any other reason documented in the medical record by the provider explaining why BMI measurement was not appropriate.</p> <p>Initial Patient Population 2: All patients 18 through 64 years before the beginning of the measurement period with at least one eligible encounter during the measurement period NOT INCLUDING encounters where the patient is receiving palliative care, refuses measurement of height and/or weight, the 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, or there is any other reason documented in the medical record by the provider explaining why BMI measurement was not appropriate</p>
Denominator	Equals Initial Patient Population
Denominator Exclusions	Patients who are pregnant.
Numerator	Patients with a documented BMI during the encounter or during the previous six months, AND when the BMI is outside of normal parameters, a follow-up plan is documented during the encounter or during the previous six months of the encounter with the BMI outside of normal parameters.
Numerator Exclusions	Not Applicable
Denominator Exceptions	None
Measure Population	Not Applicable
Measure Observations	Not Applicable
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 Patient Population 1 =**

- AND NOT:
 - OR: "Procedure, Order: Palliative Care" starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Physical Exam, Performed not done: Medical or Other reason not done" for "BMI LOINC Value LOINC Value Set" during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Physical Exam, Performed not done: Patient Reason Refused" for "BMI LOINC Value LOINC Value Set" during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
- AND: "Patient Characteristic Birthdate: birth date" >= 65 year(s) starts before start of "Measurement Period"
- AND: "Occurrence A of Encounter, Performed: BMI Encounter Code Set" during "Measurement Period"

• Denominator 1 =

- AND: "Initial Patient Population 1"

• Denominator Exclusions 1 =

- AND NOT: "Occurrence A of Diagnosis, Active: Pregnancy Dx" ends before start of "Measurement Period"
- AND: "Occurrence A of Diagnosis, Active: Pregnancy Dx" starts before or during "Measurement Period"

• Numerator 1 =

- AND:
 - OR:
 - AND: MOST RECENT: "Occurrence A of Physical Exam, Finding: BMI LOINC Value" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result >= 23 kg/m2)"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result < 30 kg/m2)"
 - OR:
 - AND: MOST RECENT: "Occurrence A of Physical Exam, Finding: BMI LOINC Value" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result >= 30 kg/m2)"
 - AND:
 - OR: "Intervention, Order: Above Normal Follow-up (reason: 'Overweight') <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Intervention, Order: Referrals where weight assessment may occur (reason: 'Overweight') <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Medication, Order: Above Normal Medications (reason: 'Overweight') <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
- OR:
 - AND: MOST RECENT: "Occurrence A of Physical Exam, Finding: BMI LOINC Value" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result < 23 kg/m2)"
 - AND:
 - OR: "Intervention, Order: Below Normal Follow up (reason: 'Underweight') <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Intervention, Order: Referrals where weight assessment may occur (reason: 'Underweight') <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Medication, Order: Below Normal Medications (reason: 'Underweight') <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"

• Denominator Exceptions 1 =

- None

----- Population Criteria 2 -----**• Initial Patient Population 2 =**

- AND NOT:
 - OR: "Procedure, Order: Palliative Care" starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Physical Exam, Performed not done: Medical or Other reason not done" for "BMI LOINC Value LOINC Value Set" during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Physical Exam, Performed not done: Patient Reason Refused" for "BMI LOINC Value

- LOINC Value Set" during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - AND: "Patient Characteristic Birthdate: birth date" >= 18 year(s) starts before start of "Measurement Period"
 - AND: "Patient Characteristic Birthdate: birth date" < 64 year(s) starts before start of "Measurement Period"
 - AND: "Occurrence A of Encounter, Performed: BMI Encounter Code Set" during "Measurement Period"
- **Denominator 2 =**
 - AND: "Initial Patient Population 2"
- **Denominator Exclusions 2 =**
 - AND NOT: "Occurrence A of Diagnosis, Active: Pregnancy Dx" ends before start of "Measurement Period"
 - AND: "Occurrence A of Diagnosis, Active: Pregnancy Dx" starts before or during "Measurement Period"
- **Numerator 2 =**
 - AND:
 - OR:
 - AND: MOST RECENT: "Occurrence A of Physical Exam, Finding: BMI LOINC Value" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result >= 18.5 kg/m2)"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result < 25 kg/m2)"
 - OR:
 - AND: MOST RECENT: "Occurrence A of Physical Exam, Finding: BMI LOINC Value" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result >= 25 kg/m2)"
 - AND:
 - OR: "Intervention, Order: Above Normal Follow-up (reason: 'Overweight')" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Intervention, Order: Referrals where weight assessment may occur (reason: 'Overweight')" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Medication, Order: Above Normal Medications (reason: 'Overweight')" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR:
 - AND: MOST RECENT: "Occurrence A of Physical Exam, Finding: BMI LOINC Value" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - AND: "Occurrence A of Physical Exam, Finding: BMI LOINC Value (result < 18.5 kg/m2)"
 - AND:
 - OR: "Intervention, Order: Below Normal Follow up (reason: 'Underweight')" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Intervention, Order: Referrals where weight assessment may occur (reason: 'Underweight')" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
 - OR: "Medication, Order: Below Normal Medications (reason: 'Underweight')" <= 6 month(s) starts before or during "Occurrence A of Encounter, Performed: BMI Encounter Code Set"
- **Denominator Exceptions 2=**
 - None

Data criteria (QDM Data Elements)

- "Diagnosis, Active: Pregnancy Dx" using "Pregnancy Dx Grouping Value Set (2.16.840.1.113883.3.600.1.1623)"
- "Encounter, Performed: BMI Encounter Code Set" using "BMI Encounter Code Set Grouping Value Set (2.16.840.1.113883.3.600.1.1751)"
- "Intervention, Order: Above Normal Follow-up" using "Above Normal Follow-up Grouping Value Set (2.16.840.1.113883.3.600.1.1525)"
- "Intervention, Order: Below Normal Follow up" using "Below Normal Follow up Grouping Value Set (2.16.840.1.113883.3.600.1.1528)"
- "Intervention, Order: Referrals where weight assessment may occur" using "Referrals where weight assessment may occur Grouping Value Set (2.16.840.1.113883.3.600.1.1527)"
- "Medication, Order: Above Normal Medications" using "Above Normal Medications RxNorm Value Set (2.16.840.1.113883.3.600.1.1498)"
- "Medication, Order: Below Normal Medications" using "Below Normal Medications RxNorm Value Set (2.16.840.1.113883.3.600.1.1499)"
- "Patient Characteristic Birthdate: birth date" using "birth date LOINC Value Set"

- (2.16.840.1.113883.3.560.100.4)"
- "Physical Exam, Finding: BMI LOINC Value" using "BMI LOINC Value LOINC Value Set (2.16.840.1.113883.3.600.1.681)"
- "Physical Exam, Performed not done: Medical or Other reason not done" using "Medical or Other reason not done SNOMED-CT Value Set (2.16.840.1.113883.3.600.1.1502)"
- "Physical Exam, Performed not done: Patient Reason Refused" using "Patient Reason Refused SNOMED-CT Value Set (2.16.840.1.113883.3.600.1.1503)"
- "Physical Exam, Performed: BMI LOINC Value" using "BMI LOINC Value LOINC Value Set (2.16.840.1.113883.3.600.1.681)"
- "Procedure, Order: Palliative Care" using "Palliative Care Grouping Value Set (2.16.840.1.113883.3.600.1.1579)"
- Attribute: "Reason: Overweight" using "Overweight SNOMED-CT Value Set (2.16.840.1.113883.3.600.2387)"
- Attribute: "Reason: Underweight" using "Underweight SNOMED-CT Value Set (2.16.840.1.113883.3.600.2388)"

Reporting Stratification

- None

Supplemental Data Elements

- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity CDC Value Set (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer" using "Payer Source of Payment Typology Value Set (2.16.840.1.114222.4.11.3591)"
- "Patient Characteristic Race: Race" using "Race CDC Value Set (2.16.840.1.114222.4.11.836)"
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex Administrative Sex Value Set (2.16.840.1.113762.1.4.1)"

Measure Set	none
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III. Analysis of Claims/Registry Data

Performance Score Distribution by Data Source

Provider-level performance scores suggest there are still gaps in care and opportunities for improvement.

Data Source*	Number of Providers (by Provider)	Average Unweighted Score	Average Weighted Score	Median	10th Percentile	25th Percentile	75th Percentile	90th Percentile
Claims	67,715	70.0%	68.1%	84.6%	24.8%	43.4%	100%	100%
Registry	19,087	66.3%	59.8%	70.9%	21.8%	42.7%	99.2%	100%

*Claims submitted 1/1/2014 through 12/31/2014. Registry submitted 1/1/2014 through 12/31/2014.

Performance Measure Score Reliability

Provider-specific reliability demonstrates a sufficient level of reliability to detect a real difference in performance scores.

In general, reliability scores vary from 0.0 to 1.0, with a score of 0.0 indicating that all variation is attributable to measurement error (noise or variation across patients within providers), whereas a reliability of 1.0 implies that all variation is caused by a real difference in performance across accountable entities.

Data Source	Number of Providers (by Provider)	Between-Provider Variance	Reliability Coefficient Mean	Reliability Coefficient Median	Reliability Coefficient Std Dev	Reliability Coefficient Min/Max
Claims	67,715	.099	.967	.998	.082	.442 – 1.00
Registry	19,087	.104	.974	.995	.065	.453 – 1.00

Claims Data Reliability and Performance (Medicare Part B 1/1/2014 – 12/31/2014)

MIN_VAL	INVAR	N	MEAN	STD	MIN	p1	p5	p10	p20	p25	p30	p40	p50	p60	p70	p75	p80	p90	p95	p99	MAX
1	DENOMINATOR	67,715	169.76	302.24	1.00	1.00	1.00	2.00	6.00	10.00	14.00	27.00	46.00	79.00	141.00	191.00	260.00	503.0	762.00	1,399.00	6,542.00
1	NUMERATOR	67,715	115.61	235.27	0.00	0.00	0.00	1.00	3.00	5.00	8.00	17.00	30.00	51.00	87.00	117.00	159.00	322.0	526.00	1,135.00	6,541.00
1	RATE	67,715	0.70	0.33	0.00	0.00	0.00	0.25	0.39	0.43	0.48	0.60	0.85	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	RELIABILITY	67,715	0.97	0.08	0.44	0.57	0.81	0.91	0.97	0.98	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	NOISE_VAR	67,715	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.13
1	SIGNAL_VAR	67,715	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	DENOMINATOR	50,891	224.71	330.74	10.00	10.00	13.00	17.00	27.00	33.00	40.00	60.00	91.00	141.00	222.00	281.00	356.00	609.0	877.00	1,422.00	8,769.00
1	NUMERATOR	50,891	153.01	260.81	0.00	0.00	5.00	10.00	17.00	21.00	26.00	39.00	58.00	87.00	135.00	172.00	222.00	400.0	616.00	824.00	4,768.00
1	RATE	50,891	0.70	0.30	0.00	0.00	0.19	0.31	0.40	0.44	0.47	0.56	0.77	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	RELIABILITY	50,891	0.98	0.03	0.80	0.84	0.90	0.93	0.97	0.98	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	NOISE_VAR	50,891	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.06	0.13
1	SIGNAL_VAR	50,891	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	DENOMINATOR	44,291	256.09	343.65	20.00	20.00	24.00	29.00	41.00	49.00	58.00	83.00	120.00	178.00	267.00	328.00	406.00	662.0	931.00	1,576.00	6,542.00
2	NUMERATOR	44,291	174.27	273.26	0.00	0.00	10.00	17.00	26.00	32.00	38.00	53.00	76.00	109.00	162.00	202.00	253.00	441.0	665.00	1,313.00	6,541.00
2	RATE	44,291	0.69	0.30	0.00	0.00	0.22	0.32	0.40	0.43	0.46	0.55	0.73	0.94	0.99	1.00	1.00	1.00	1.00	1.00	1.00
2	RELIABILITY	44,291	0.99	0.02	0.89	0.90	0.93	0.95	0.98	0.98	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2	NOISE_VAR	44,291	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
2	SIGNAL_VAR	44,291	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Registry Data Reliability and Performance (PQRS 1/1/2014 – 12/31/2014)

MIN_VAL	INVAR	N	MEAN	STD	MIN	p1	p5	p10	p20	p25	p30	p40	p50	p60	p70	p75	p80	p90	p95	p99	MAX
1	DENOMINATOR	19,087	210.47	346.33	1.00	1.00	4.00	9.00	25.00	34.00	45.00	72.00	109.00	158.00	219.00	260.00	313.00	500.0	706.00	1,422.00	8,769.00
1	NUMERATOR	19,087	125.87	195.53	0.00	0.00	1.00	3.00	12.00	18.00	25.00	42.00	66.00	96.00	138.00	164.00	196.00	307.0	439.00	824.00	4,768.00
1	RATE	19,087	0.66	0.31	0.00	0.00	0.03	0.22	0.38	0.43	0.48	0.58	0.71	0.84	0.96	0.99	1.00	1.00	1.00	1.00	1.00
1	RELIABILITY	19,087	0.97	0.07	0.45	0.62	0.87	0.94	0.97	0.98	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	NOISE_VAR	19,087	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.06	0.13
1	SIGNAL_VAR	19,087	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	DENOMINATOR	17,171	233.49	357.84	10.00	11.00	16.00	23.00	40.00	51.00	63.00	94.00	131.00	180.00	243.00	285.00	339.00	529.0	733.00	1,510.00	8,769.00
10	NUMERATOR	17,171	139.61	201.54	0.00	0.00	4.00	10.00	22.00	28.00	36.00	56.00	80.00	111.00	153.00	180.00	212.00	327.0	461.00	860.00	4,768.00
10	RATE	17,171	0.66	0.30	0.00	0.00	0.08	0.24	0.38	0.43	0.47	0.57	0.70	0.82	0.94	0.98	1.00	1.00	1.00	1.00	1.00
10	RELIABILITY	17,171	0.98	0.03	0.81	0.86	0.92	0.95	0.98	0.98	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10	NOISE_VAR	17,171	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03
10	SIGNAL_VAR	17,171	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	DENOMINATOR	15,900	251.02	366.25	20.00	21.00	26.00	34.00	53.00	64.00	78.00	109.00	148.00	197.00	260.00	302.00	359.00	552.0	758.00	1,581.50	8,769.00
20	NUMERATOR	15,900	150.01	205.92	0.00	0.00	6.00	17.00	30.00	38.00	46.00	66.00	91.00	122.00	164.00	191.00	223.00	340.0	480.00	880.00	4,768.00
20	RATE	15,900	0.66	0.30	0.00	0.00	0.09	0.26	0.39	0.43	0.48	0.57	0.70	0.82	0.93	0.97	1.00	1.00	1.00	1.00	1.00
20	RELIABILITY	15,900	0.99	0.02	0.89	0.91	0.95	0.96	0.98	0.99	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	NOISE_VAR	15,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
20	SIGNAL_VAR	15,900	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Disparities in Performance Rates by Race, Age and Gender
(Claims 1/1/2014 – 12/31/2014)

Race	Performance Rate
Unknown	68.3%
White	68.7%
Black	59.8%
Other	72.7%
Asian	78.3%
Hispanic	70.7%
North American Native	61.9%

CHI-SQUARE = 45,987.1, DF = 6, Prob < 0.0001
N = 11,495,018

Age Category	Performance Rate
18–64	54.4%
65–79	69.6%
80+	73.2%

CHI-SQUARE = 201,509, DF = 2, Prob < 0.0001
N = 11,495,018

Sex	Performance Rate
Male	70.0%
Female	66.7%

CHI-SQUARE = 14,388.3, DF = 1, Prob < 0.0001
N = 11,495,018

IV. Analysis of EHR Data

Performance Score Distribution

Provider-level performance scores suggest that there are still gaps in care and opportunities for improvement for providers reporting using EHR data.

Data Source*	Number of Providers (by Provider)	Average Weighted Score	Average Unweighted Score	Median	10th Percentile	25th Percentile	75th Percentile	90th Percentile
EHR	357	36.7%	33.6%	33.7%	12.5%	25.0%	39.6%	50.0%

EHR data from convenience sample of three practices. One practice provided data from 10/3/2015 to 12/31/2015. Another practice provided data from 1/1/2014 to 12/31/2014. Still another practice provided data from 3/28/2015 to 3/26/2016.

Performance Measure Score Reliability

Provider-specific reliability demonstrates a sufficient level of reliability to detect a real difference in performance scores. We considered reliability coefficients of 0.70 and higher satisfactory.

In general, reliability scores vary from 0.0 to 1.0, with a score of 0.0 indicating that all variation is attributable to measurement error (noise or variation across patients within providers), whereas a reliability of 1.0 implies that all variation is caused by a real difference in performance across accountable entities.

Data Source	Number of Providers (by Provider)	Between-Provider Variance	Reliability Coefficient Mean	Reliability Coefficient Median	Reliability Coefficient Std Dev	Reliability Coefficient Min/Max
EHR	356	0.03	0.75	0.78	0.22	0.09 – 1.00

Critical Data Element Testing (Validity)

Clinical reviewers abstracted 315 cases from 66 providers from the same time frames as the EHR data to assess validity of EHR reports of encounters at three practices. In this approach, the manually abstracted records for each case are considered the gold standard when compared with the electronically extracted EHR report. This methodology assesses the validity of critical data elements. Post hoc power analysis indicates that—based on the number of cases abstracted, the prevalence of the numerator condition, and the specificity—our sample of 315 cases had greater than 99% power to detect at least substantial Kappa scores between the EHR extract and chart abstracted data with 95% confidence.

Numerator criteria agreement:

Unadjusted agreement: 90.16%

Simple Kappa coefficient (chance-adjusted): 0.80 (95% confidence interval: 0.74 – 0.87).

These numerator agreement scores suggest that validity is substantial.

EHR Data Reliability and Performance

MIN_VAL	INVAR	N	MEAN	STD	MIN	p1	p5	p10	p20	p25	p30	p40	p50	p60	p70	p75	p80	p90	p95	p99	MAX
1	DENOMINATOR	356	186.24	320.91	1	1	2	4	13	16	18	25	38	64	117	187.5	355	605	907	1408	2331
1	NUMERATOR	356	68.34	122.56	0	0	0	1	3	4	5	7	13	22	42	70.5	105	217	351	558	856
1	RATE	356	0.34	0.18	0.00	0.00	0.00	0.13	0.23	0.25	0.28	0.31	0.34	0.36	0.39	0.40	0.42	0.50	0.66	1.00	1.00
1	RELIABILITY	356	0.75	0.22	0.09	0.15	0.31	0.44	0.55	0.60	0.64	0.70	0.78	0.86	0.95	0.96	0.97	0.99	1.00	1.00	1.00
1	NOISE_VAR	356	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.03	0.074	0.13
1	SIGNAL_VAR	356	0.01	0.00																	
10	DENOMINATOR	305	216.83	337.21	10	11	12	15	18.5	22	25	36	49	83	169	278	441.5	639	939	1408	2331
10	NUMERATOR	305	79.58	129.06	0	1	3	3	5	6	7	13	19	29.5	70	89	151	233	367	558	856
10	RATE	305	0.34	0.13	0.00	0.05	0.13	0.18	0.25	0.27	0.29	0.31	0.34	0.36	0.38	0.39	0.41	0.48	0.54	0.74	0.92
10	RELIABILITY	305	0.76	0.18	0.35	0.38	0.45	0.49	0.57	0.62	0.65	0.7	0.77	0.84	0.91	0.95	0.96	0.98	0.98	0.99	1.00
10	NOISE_VAR	305	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
10	SIGNAL_VAR	305	0.01	0.00																	
20	DENOMINATOR	240	271.55	361.28	20	20	22	24	32.5	36.5	41	60.5	84.5	152	353	450.5	518	683	1029.5	1448	2331
20	NUMERATOR	240	100.02	138.62	0	3	5	6	10.5	13	15	21	31.5	63.5	103.5	157	192	289.5	418	568	856
20	RATE	240	0.35	0.12	0.00	0.05	0.16	0.21	0.28	0.30	0.30	0.33	0.35	0.37	0.39	0.40	0.41	0.48	0.57	0.82	0.92
20	RELIABILITY	240	0.83	0.13	0.52	0.54	0.59	0.63	0.69	0.72	0.74	0.80	0.85	0.91	0.96	0.97	0.97	0.98	0.99	0.99	1.00
20	NOISE_VAR	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
20	SIGNAL_VAR	240	0.01	0.00																	

Disparities in Performance Rates, by Age and Gender
(EHR Data)

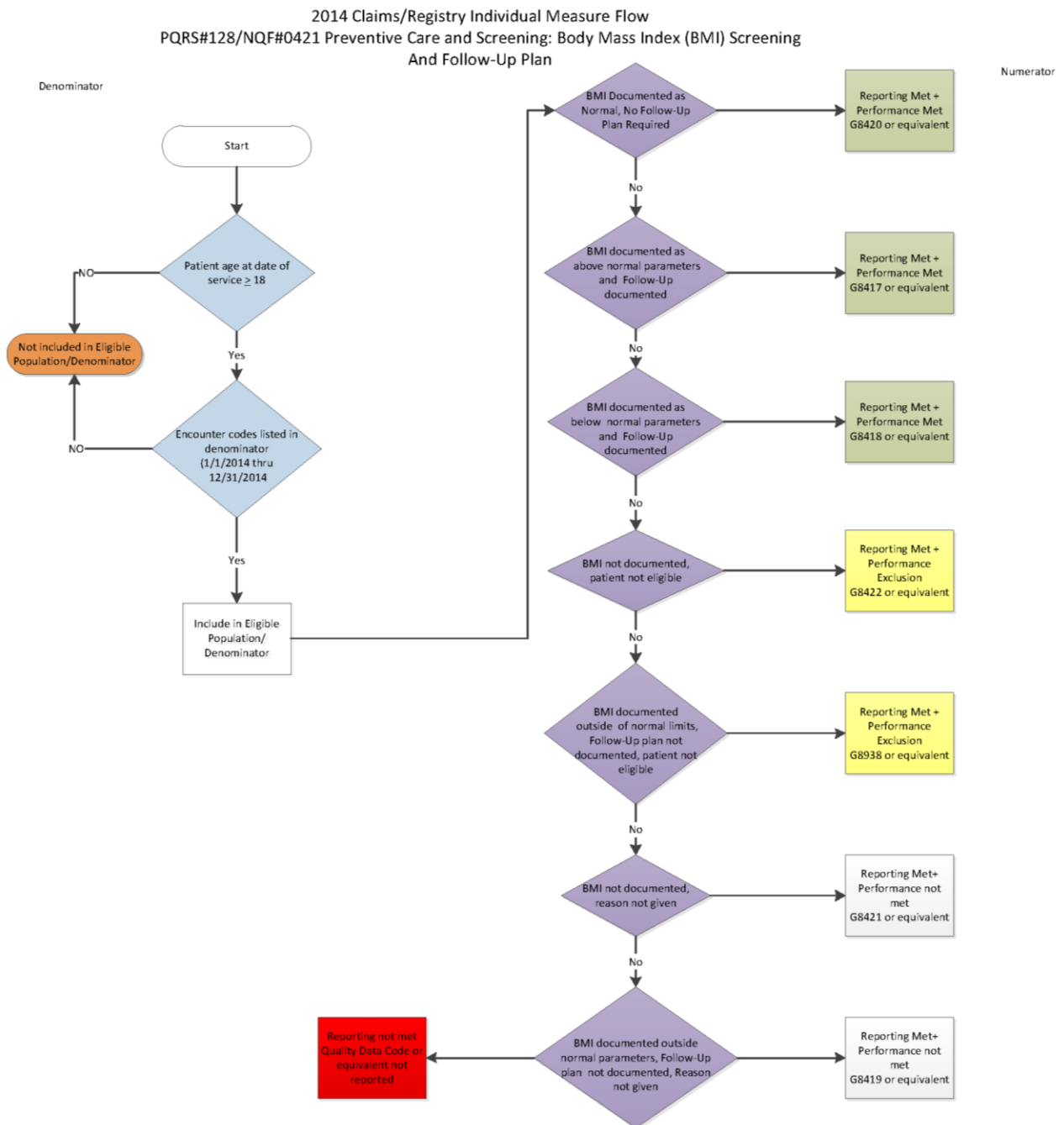
Age Category	Performance Rate
18–64	33.3%
65–79	47.1%
80+	47.1%

CHI-SQUARE = 989.0, DF = 2, Prob < 0.0001
N = 66,267

Sex	Performance Rate
Male	36.0%
Female	37.1%

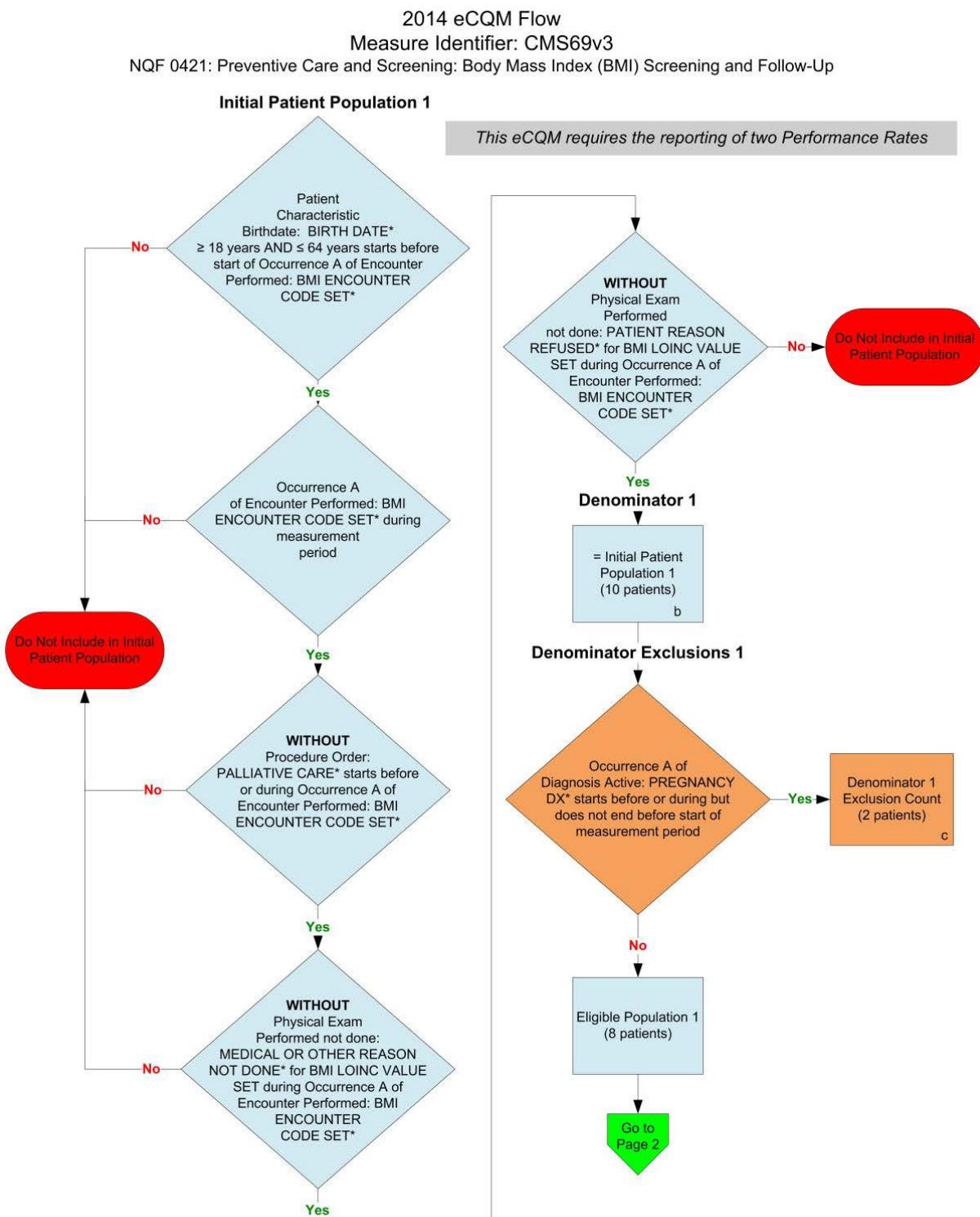
CHI-SQUARE = 8.3, DF = 1, Prob < 0.004
N = 66,267

V. Measure Logic Flow Diagram Claims/Registry



Note: See the posted Measure Specification for specific coding and instructions to report this measure.

VI. Measure Logic Flow Diagram eMeasure



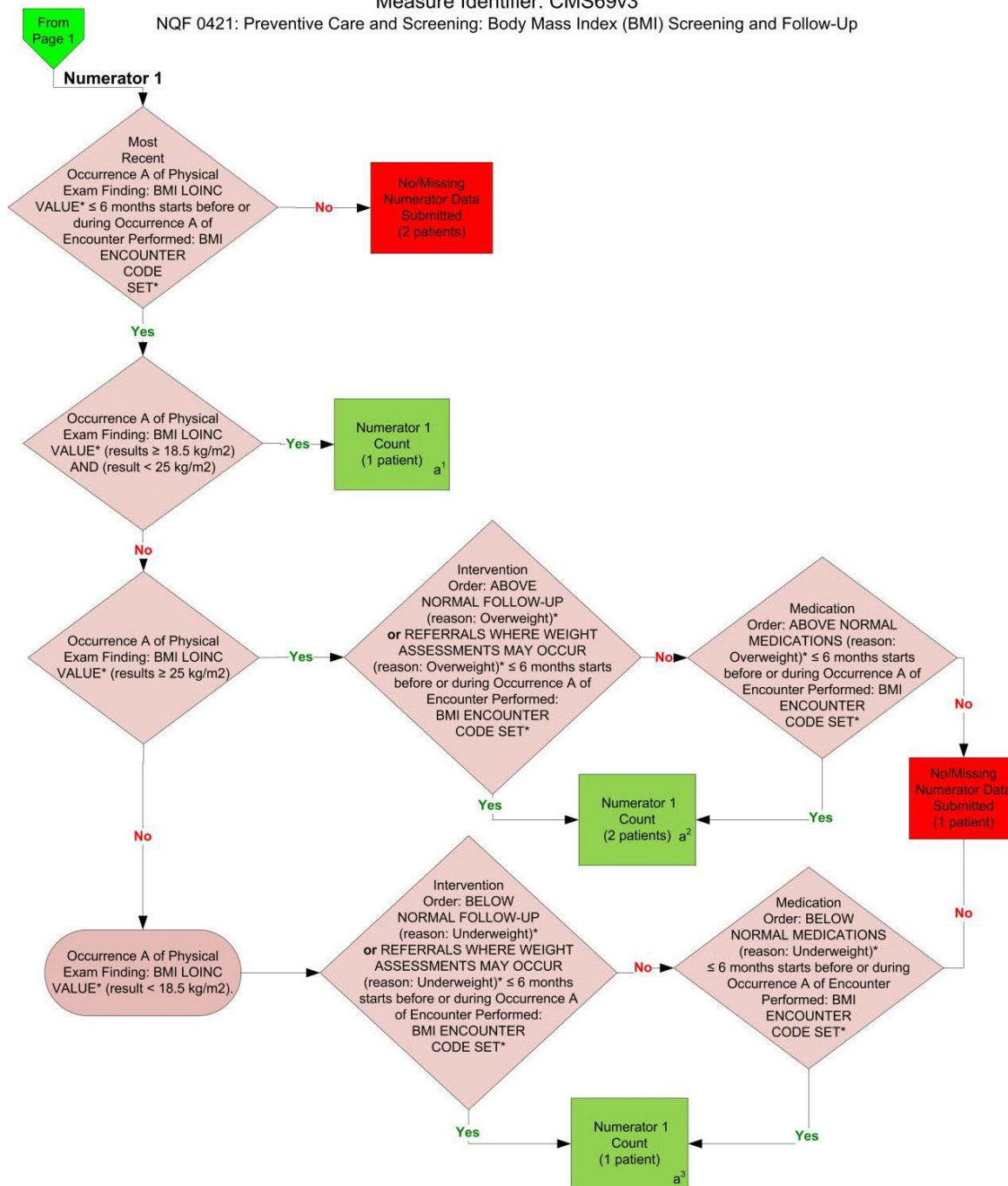
*Please refer to the specific section of the eCQM to identify the QDM data elements and associated value sets for use in reporting this eCQM.

Note: eCQM Flow CMS69v2 unavailable. Minor change in Version 3 – age at start of encounter rather than measurement period

2014 eCQM Measure Flows

Measure Identifier: CMS69v3

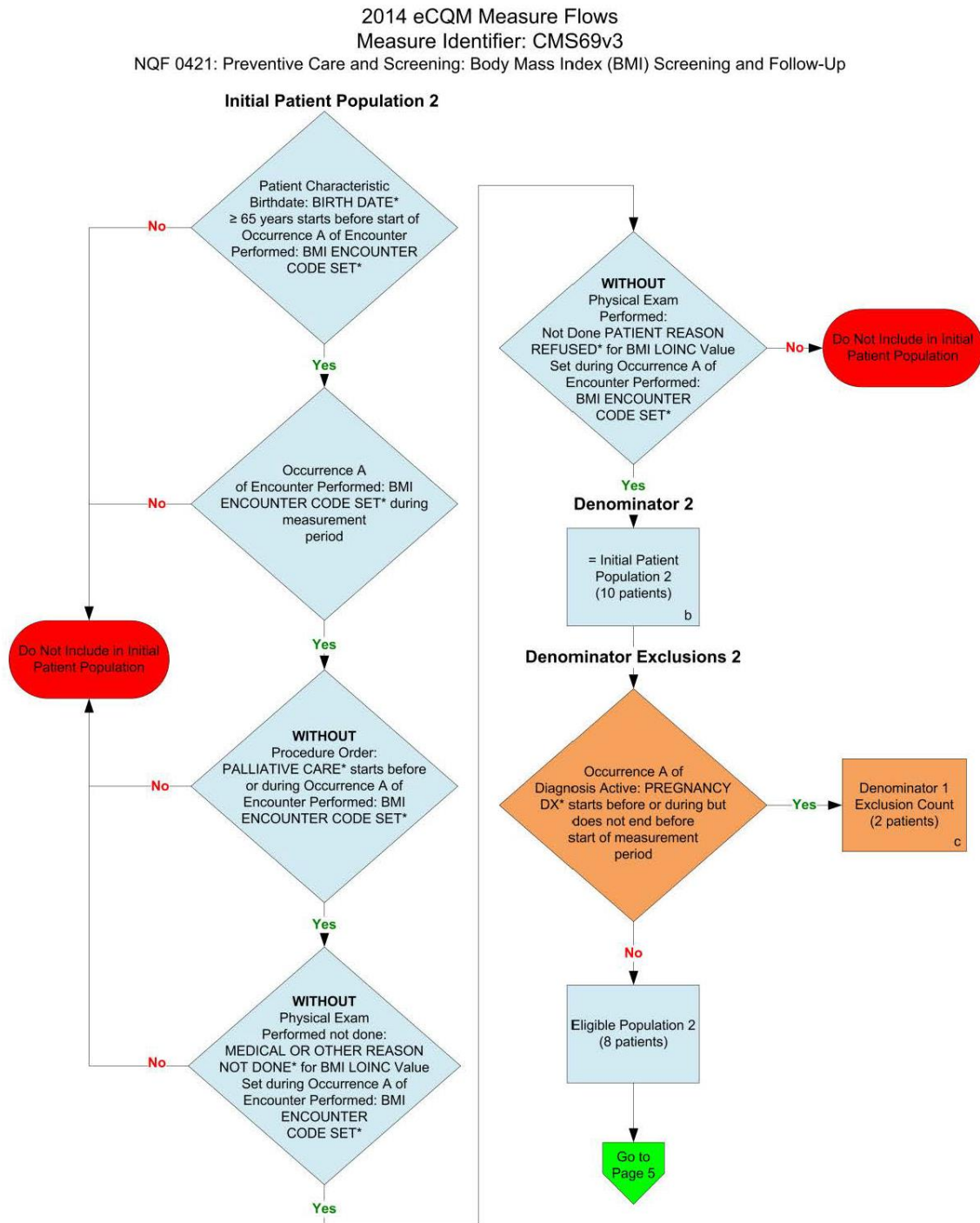
NQF 0421: Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up



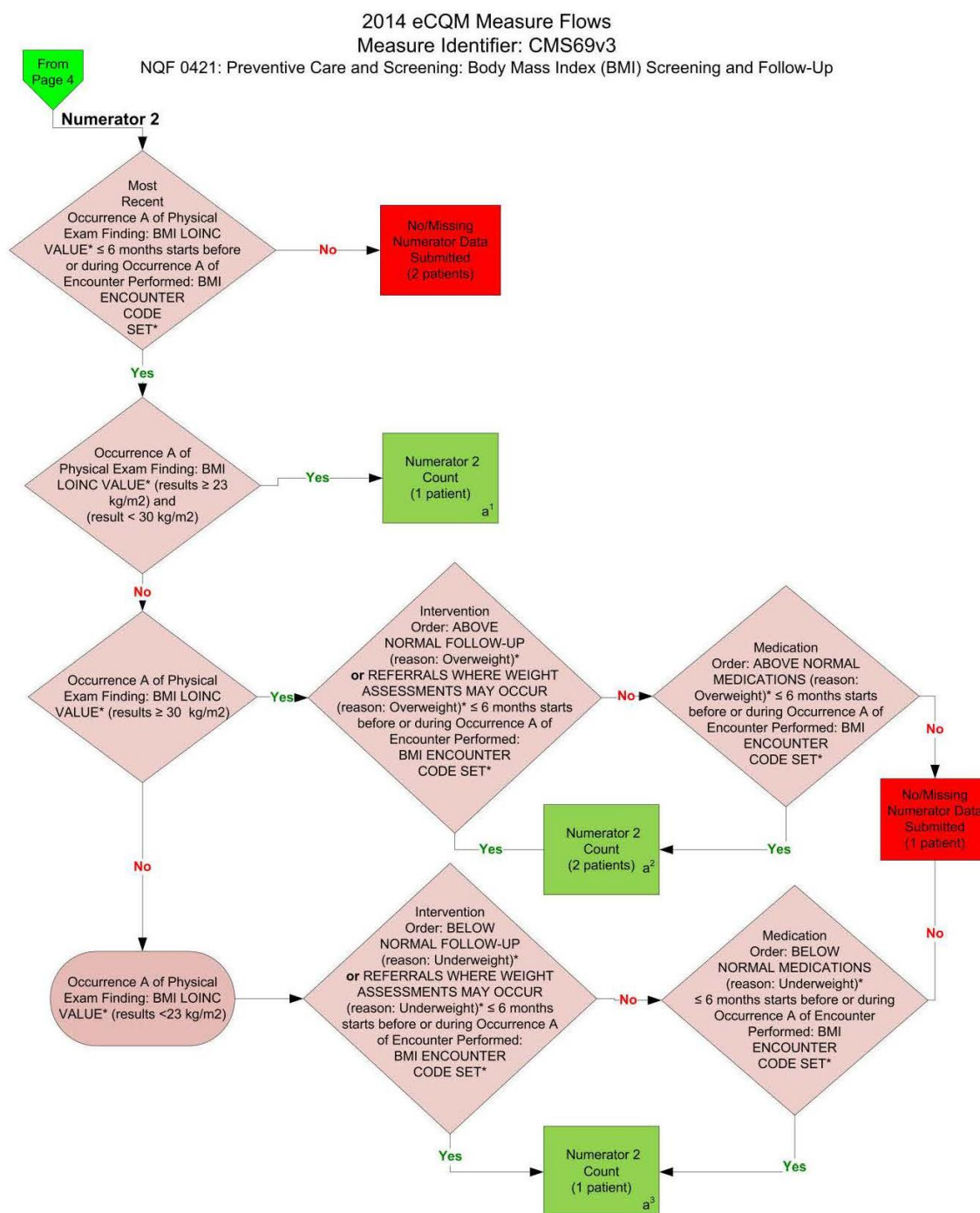
*Please refer to the specific section of the eCQM to identify the QDM data elements and associated value sets for use in reporting this eCQM.

SAMPLE CALCULATION: Combination of Initial Patient Population 1; Denominator 1; Numerator 1

Performance Rate =
$$\frac{\text{Numerator } (a^1 + a^2 + a^3 = 4 \text{ patients})}{\text{Denominator } (b = 10 \text{ patients}) - \text{Denominator Exclusions } (c = 2 \text{ patients}) - \text{Denominator Exceptions } (N/A)} = 50.00\%$$



*Please refer to the specific section of the eCQM to identify the QDM data elements and associated value sets for use in reporting this eCQM.





*Please refer to the specific section of the eCQM to identify the QDM data elements and associated value sets for use in reporting this eCQM.

SAMPLE CALCULATION: Combination of Initial Patient Population 2; Denominator 2; Numerator 2

Performance Rate = $\frac{\text{Numerator } (a^1 + a^2 + a^3 = 4 \text{ patients})}{\text{Denominator } (b = 10 \text{ patients}) - \text{Denominator Exclusions } (c = 2 \text{ patients}) - \text{Denominator Exceptions } (N/A)} = 50.00\%$

VII. References

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Jensen MD, Ryan DH, Apovian CM, Ard JD, Comuzzie AG, Donato KA, Hu FB, Hubbard VS, Jakicic JM, Kushner RF, Loria C, Millen BE, Nonas CA, Pi-Sunyer FX, Stevens J, Stevens VJ, Wadden TA, Wolfe BM, & Yanovski SZ. 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. <i>Circulation</i> . 2013; 00:000–000. Retrieved from: http://circ.ahajournals.org/content/early/2013/11/11/01.cir.0000437739.71477.ee.citation	

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