

Measure #398: Optimal Asthma Control – National Quality Strategy Domain: Effective Clinical Care

2017 OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

MEASURE TYPE:
Outcome

DESCRIPTION:
Composite measure of the percentage of pediatric and adult patients whose asthma is well-controlled as demonstrated by one of three age appropriate patient reported outcome tools and not at risk for exacerbation

INSTRUCTIONS:
This measure is to be reported a minimum of **once per performance period** for all patients with a diagnosis of asthma seen during the **performance period**. This measure may be reported by eligible clinicians who perform the quality actions described in the measure for the primary management of patients with asthma based on the services provided and the measure-specific denominator coding.

Measure Reporting:
The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by 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.

This measure will be calculated with 7 performance rates:

1. Overall Percentage for patients (aged 5-50 years) with well-controlled asthma, without elevated risk of exacerbation.
2. Percentage of pediatric patients (aged 5-17 years) with well-controlled asthma, without elevated risk of exacerbation.
3. Percentage of adult patients (aged 18-50 years) with well-controlled asthma, without elevated risk of exacerbation.
4. Asthma well-controlled (take the most recent ACT) for patients 5 to 17 with Asthma
5. Asthma well-controlled (take the most recent ACT) for patients 18 to 50 with Asthma
6. Patient not at elevated risk of exacerbation for patients 5 to 17 with Asthma
7. Patient not at elevated risk of exacerbation for patients 18 to 50 with Asthma

DENOMINATOR (REPORTING CRITERIA 1):

Patients ages 5 to 17 with asthma

Denominator Criteria (Eligible Cases) 1:

Patients aged 5-17 years

AND

Diagnosis for asthma (ICD-10-CM): J45.20, J45.21, J45.22, J45.30, J45.31, J45.32, J45.40, J45.41, J45.42, J45.50, J45.51, J45.52, J45.901, J45.902, J45.909, J45.990, J45.991, J45.998

AND

Patient encounter during the performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215

AND

At least two visits for asthma over the last two years with at least one visit for any reason in the last 12 months

AND NOT

DENOMINATOR EXCLUSIONS:

Diagnosis for chronic obstructive pulmonary disease, emphysema, cystic fibrosis, or acute respiratory failure (ICD-10-CM): E84.0, E84.11, E84.19, E84.8, E84.9, J43.0, J43.1, J43.2, J43.8, J43.9, J44.0, J44.1, J44.9, J68.4, J96.00, J96.01, J96.02, J96.20, J96.21, J96.22, J98.2, J98.3

OR

Patient died prior to the end of the measurement period

OR

Patient was a permanent nursing home resident

OR

Patient was in hospice or receiving palliative care services at any time during the measurement period

NUMERATOR (ALL OR NOTHING):

The number of asthma patients who meet ALL of the following targets

Numerator Options:

Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

COMPONENT 1:

Asthma well-controlled (take the most recent asthma control tool available during the measurement period)

- Asthma Control Test™ (ACT) score of 20 or above - ages 12 and older
- Childhood Asthma Control Test (C-ACT) score of 20 or above - ages 11 and younger
- Asthma Control Questionnaire (ACQ) score of 0.75 or lower - ages 17 and older
- Asthma Therapy Assessment Questionnaire (ATAQ) score of 0 – Pediatric (ages 5 – 17) or Adult (ages 18 and older)

Component Options:

Performance Met:

Asthma well-controlled based on the ACT, C-ACT, ACQ, or ATAQ score and results documented (**G9432**)

OR

Performance Not Met:

Asthma not well-controlled based on the ACT, C-ACT, ACQ, or ATAQ score, OR specified asthma control tool not used, reason not given (**G9434**)

AND

COMPONENT 2:

Patient not at elevated risk of exacerbation

NUMERATOR NOTE: To meet performance for this component, documentation of the sum of the patients reported values for the following questions must be less than two:

- Number of emergency department visits not resulting in a hospitalization due to asthma in last 12 months
- Number of inpatient hospitalizations requiring an overnight stay due to asthma in last 12 months.

Component Options:

Performance Met:

Total number of emergency department visits and inpatient hospitalizations less than two in the past 12 months (**G9521**)

OR

Performance Not Met:

Total number of emergency department visits and inpatient hospitalizations equal to or greater than two in the past 12 months OR patient not screened, reason not given (**G9522**)

DENOMINATOR (REPORTING CRITERIA 2):

Patients ages 18 to 50 with asthma

Denominator Criteria (Eligible Cases) 2:

Patients aged 18-50 years

AND

Diagnosis for asthma (ICD-10-CM): J45.20, J45.21, J45.22, J45.30, J45.31, J45.32, J45.40, J45.41, J45.42, J45.50, J45.51, J45.52, J45.901, J45.902, J45.909, J45.990, J45.991, J45.998

AND

Patient encounter during the performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215

AND

At least two visits for asthma over the last two years with at least one visit for any reason in the last 12 months

AND NOT

DENOMINATOR EXCLUSIONS:

Diagnosis for chronic obstructive pulmonary disease, emphysema, cystic fibrosis, or acute respiratory failure (ICD-10-CM): E84.0, E84.11, E84.19, E84.8, E84.9, J43.0, J43.1, J43.2, J43.8, J43.9, J44.0, J44.1, J44.9, J68.4, J96.00, J96.01, J96.02, J96.20, J96.21, J96.22, J98.2, J98.3

OR

Patient Died Prior to the End of the Measurement Period

OR

Patient was a Permanent Nursing Home Resident

OR

Patient was in Hospice or Receiving Palliative Care Services at any time During the Measurement Period

NUMERATOR (ALL OR NOTHING):

The number of asthma patients who meet ALL of the following targets

Numerator Options:

Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

COMPONENT 1:

Asthma well-controlled (take the most recent asthma control tool available during the measurement period)

- Asthma Control Test™ (ACT) score of 20 or above - ages 12 and older
- Asthma Control Questionnaire (ACQ) score of 0.75 or lower - ages 17 and older
- Asthma Therapy Assessment Questionnaire (ATAQ) score of 0 – Pediatric (ages 5 – 17) or Adult (ages 18 and older)

Component Options:

Performance Met:

Asthma well-controlled based on the ACT, C-ACT, ACQ, or ATAQ score and results documented (**G9432**)

OR

Performance Not Met:

Asthma not well-controlled based on the ACT, C-ACT, ACQ, or ATAQ score, OR specified asthma control tool not used, reason not given (**G9434**)

AND

COMPONENT 2:

Patient not at elevated risk of exacerbation

NUMERATOR NOTE: To meet performance for this component, documentation of the sum of the patients reported values for the following questions must be less than two:

- Number of emergency department visits not resulting in a hospitalization due to asthma in last 12 months
- Number of inpatient hospitalizations requiring an overnight stay due to asthma in last 12 months

Component Options:

Performance Met:

Total number of emergency department visits and inpatient hospitalizations less than two in the past 12 months (G9521)

OR

Performance Not Met:

Total number of emergency department visits and inpatient hospitalizations equal to or greater than two in the past 12 months OR patient not screened, reason not given (G9522)

RATIONALE:

Roughly 7% of adults and children in Minnesota are currently living with asthma. Asthma is a chronic disease associated with familial, infectious, allergenic, socioeconomic, psychosocial and environmental factors. It is not curable but is treatable. Despite improvements in diagnosis and management, and an increased understanding of the epidemiology, immunology, and biology of the disease, asthma prevalence has progressively increased over the past 15 years.

CLINICAL RECOMMENDATION STATEMENTS:

From the National Quality Forum's 2013 report, Patient Reported Outcomes (PROs) in Performance Measurement:

Patient and family engagement is increasingly acknowledged as a key component of a comprehensive strategy, (along with performance improvement and accountability), to achieve a high quality, affordable health system. Emerging evidence affirms that patients who are engaged in their care tend to experience better outcomes and choose less costly but effective interventions.

Historically, with the exception of collecting feedback on satisfaction or experience with care, patients remain an untapped resource in assessing the quality of healthcare and of long-term support services. Patients are a valuable and, arguably, the authoritative source of information on outcomes beyond experience with care. These include health-related quality of life, functional status, symptom and symptom burden, and health behaviors.

Patient Reported Outcome Measures (PROMs) are standardized instruments that capture patients' self-assessment of their health and can provide timely information on patient health status, function and symptoms over time that can be used to improve patient-centered care and inform clinical decision-making.

The Asthma Control Test™ (ACT) is a validated self-administered survey utilizing 5 questions to assess asthma control on a scale from 0 (poor control) to 5 (total control) in individuals 12 years and older. © 2002 by QualityMetric Incorporated. Asthma Control Test is a trademark of QualityMetric Incorporated.

The Childhood Asthma Control Test (C-ACT) is a caregiver-assisted, child-completed tool that can be used with or without lung function assessment to assess pediatric asthma control at home or in clinical practice for children ages 4-11 years. It consists of 7 questions of which 4 are child-reported and 3 are caregiver-reported questions. ©2011 The GlaxoSmithKline Group of Companies.

The Asthma Control Questionnaire (ACQ) is a validated, self-administered survey available in various formats from the developer, Elizabeth F. Juniper, MCSP, MSc. [Link to ACQ Survey](#)

The Asthma Therapy Assessment Questionnaire (ATAQ) is available in a version for adults (18 and over) and a version for children and adolescents (5 – 17). © 2011 Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc.

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2017 Registry Individual Measure Flow #398: Optimal Asthma Control Reporting Criteria One



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

**Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

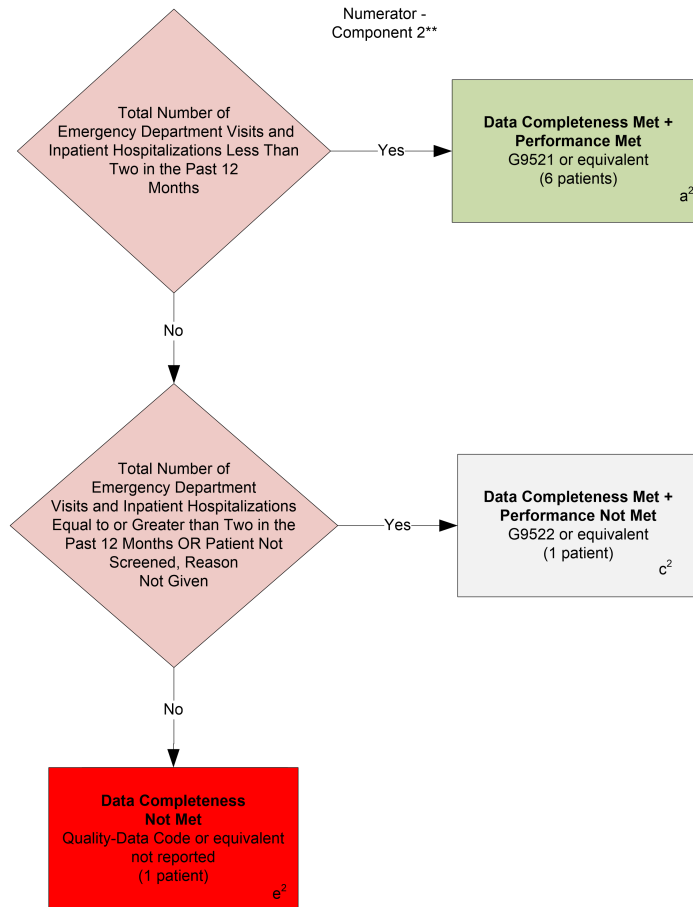
***This measure should be calculated with 7 Performance Rates. Review the Sample Calculation to ensure the data completeness and performance rates are calculated accurately.

NOTE: Reporting Frequency: Patient-process

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2017 Registry Individual Measure Flow #398: Optimal Asthma Control



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

**Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

***This measure should be calculated with 7 Performance Rates. Review the Sample Calculation to ensure the data completeness and performance rates are calculated accurately.

NOTE: Reporting Frequency: Patient-process

2017 Registry Individual Measure Flow #398: Optimal Asthma Control Reporting Criteria Two



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

**Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

***This measure should be calculated with 7 Performance Rates. Review the Sample Calculation to ensure the data completeness and performance rates are calculated accurately.

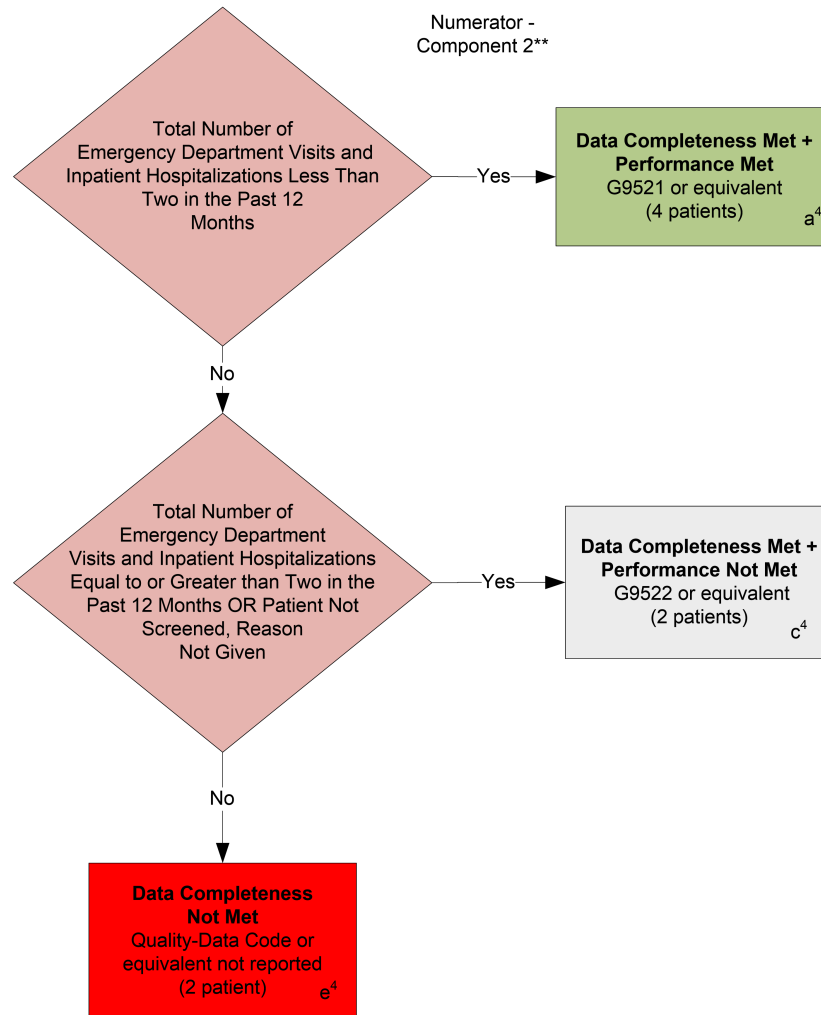
****It is anticipated for registry reporting that for every performance rate, data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate

NOTE: Reporting Frequency: Patient-process

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2017 Registry Individual Measure Flow #398: Optimal Asthma Control



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

**Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

***This measure should be calculated with 7 Performance Rates. Review the Sample Calculation to ensure the data completeness and performance rates are calculated accurately.

****It is anticipated for registry reporting that for every performance rate, data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate

NOTE: Reporting Frequency: Patient-process

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**2017 Registry Individual Measure Flow: Sample Calculation
#398: Optimal Asthma Control**

Data Completeness Criteria 1	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8
Numerator Component 1	Met (a ¹)	Met (a ¹)	Met (a ¹)	Met (a ¹)	Met (a ¹)	Not Met (c ¹)	Not Met (c ¹)	Not Reported (e ¹)
Numerator Component 2	Met (a ²)	Met (a ²)	Met (a ²)	Met (a ²)	Met (a ²)	Met (a ²)	Not Met (c ²)	Not Reported (e ²)
Data Completeness Criteria 2	Patient 9	Patient 10	Patient 11	Patient 12	Patient 13	Patient 14	Patient 15	Patient 16
Numerator Component 1	Met (a ³)	Not Met (c ³)	Met (a ³)	Not Reported (e ³)	Met (a ³)	Not Reported (e ³)	Not Met (c ³)	Not Reported (e ³)
Numerator Component 2	Met (a ⁴)	Not Met (c ⁴)	Met (a ⁴)	Not Reported (e ⁴)	Met (a ⁴)	Met (a ⁴)	Not Met (c ⁴)	Not Reported (e ⁴)

SAMPLE CALCULATIONS: Data Completeness One****

Data Completeness=

$$\frac{\text{Performance Met (a}^1\text{=5 patients) + Performance Not Met (c}^1\text{=2 patients)}}{\text{Eligible Population / Denominator (d}^1\text{=8 patients)}} = \frac{7 \text{ patients}}{8 \text{ patients}} = 87.50\%$$

SAMPLE CALCULATIONS: Data Completeness Two****

Data Completeness=

$$\frac{\text{Performance Met (a}^2\text{=6 patients) + Performance Not Met (c}^2\text{=1 patients)}}{\text{Eligible Population / Denominator (d}^1\text{=8 patients)}} = \frac{7 \text{ patients}}{8 \text{ patients}} = 87.50\%$$

SAMPLE CALCULATIONS: Data Completeness Three****

Data Completeness=

$$\frac{\text{Performance Met (a}^3\text{=3 patients) + Performance Not Met (c}^3\text{=2 patients)}}{\text{Eligible Population / Denominator (d}^2\text{=8 patients)}} = \frac{5 \text{ patients}}{8 \text{ patients}} = 62.50\%$$

SAMPLE CALCULATIONS: Data Completeness Four****

Data Completeness=

$$\frac{\text{Performance Met (a}^4\text{=4 patients) + Performance Not Met (c}^4\text{=2 patients)}}{\text{Eligible Population / Denominator (d}^2\text{=8 patients)}} = \frac{6 \text{ patients}}{8 \text{ patients}} = 75.00\%$$

SAMPLE CALCULATION: Performance Rate One: Overall Percentage for patients (aged 5-50 years) with well-controlled asthma, without elevated risk of exacerbation

Reporting Criteria 1 and 2:

Performance Rate=

$$\frac{\text{Performance Met (a=8 patients)}}{\text{Data Completeness Numerator (12 patients)}} = \frac{8 \text{ patients}}{12 \text{ patients}} = 66.67\%$$

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

**Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

***This measure should be calculated with 7 Performance Rates. Review the Sample Calculation to ensure the data completeness and performance rates are calculated accurately.

****It is anticipated for registry reporting that for every performance rate, data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate

NOTE: Reporting Frequency: Patient-process

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2017 Registry Individual Measure Flow: Sample Calculation #398: Optimal Asthma Control

SAMPLE CALCULATION: Performance Rate Two: Percentage of pediatric patients (aged 5-17 years) with well-controlled asthma, without elevated risk of exacerbation

Reporting Criteria 1, Component 1 and 2:

Performance Rate=

$$\frac{\text{Performance Met (a=5 patients)}}{\text{Data Completeness Numerator (7 patients)}} = \frac{5 \text{ patients}}{7 \text{ patients}} = 71.43\%$$

SAMPLE CALCULATION: Performance Rate Three: Percentage of adult patients (aged 18-50 years) with well-controlled asthma, without elevated risk of exacerbation

Reporting Criteria 2, Component 1 and 2:

Performance Rate=

$$\frac{\text{Performance Met (a=3 patients)}}{\text{Data Completeness Numerator (5 patients)}} = \frac{3 \text{ patients}}{5 \text{ patients}} = 60.00\%$$

SAMPLE CALCULATION: Performance Rate Four: Asthma well-controlled (take the most recent- ACT) for patients 5 to 17 with Asthma

Reporting Criteria 1, Component 1:

Performance Rate=

$$\frac{\text{Performance Met (a^1=5 patients)}}{\text{Data Completeness Numerator (7 patients)}} = \frac{5 \text{ patients}}{7 \text{ patients}} = 71.43\%$$

SAMPLE CALCULATION: Performance Rate Five: Asthma well-controlled (take the most recent ACT) for patients 18 to 50 with Asthma

Reporting Criteria 2, Component 1:

Performance Rate=

$$\frac{\text{Performance Met (a^3=3 patients)}}{\text{Data Completeness Numerator (5 patients)}} = \frac{3 \text{ patients}}{5 \text{ patients}} = 60.00\%$$

SAMPLE CALCULATION: Performance Rate Six: Patient not at elevated risk of exacerbation for patients 5 to 17 with Asthma

Reporting Criteria 1, Component 2:

Performance Rate=

$$\frac{\text{Performance Met (a^2=6 patients)}}{\text{Data Completeness Numerator - (7 patients)}} = \frac{6 \text{ patients}}{7 \text{ patients}} = 85.71\%$$

SAMPLE CALCULATION: Performance Rate Seven: Patient not at elevated risk of exacerbation for patients 18 to 50 with Asthma

Reporting Criteria 2, Component 2:

Performance Rate=

$$\frac{\text{Performance Met (a^4=4 patients)}}{\text{Data Completeness Numerator (6 patients)}} = \frac{4 \text{ patients}}{6 \text{ patients}} = 60.00\%$$

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

**Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.

***This measure should be calculated with 7 Performance Rates. Review the Sample Calculation to ensure the data completeness and performance rates are calculated accurately.

NOTE: Reporting Frequency: Patient-process

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2017 Registry Individual Measure Flow
#398: Optimal Asthma Control

This Measure Requires Data Completeness of Seven Performance Rates

Please refer to the specific section of the Measure Specification to identify the denominator and numerator information for use in reporting this Individual Measure.

Reporting Criteria 1:

1. Start with Denominator
2. Check Patient Age:
 - a. If the Age is 5 thru 17 years of age at Date of Service and equals No during the measurement period, do not include in Eligible Patient Population. Stop Processing.
 - b. If the Age is 5 thru 17 years of age at Date of Service and equals Yes during the measurement period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:
 - a. If Diagnosis of Asthma as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Asthma as Listed in the Denominator equals Yes, proceed to Check Other Patient Diagnosis.
4. Check Encounter Performed:
 - a. If Encounter as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Encounter as Listed in the Denominator equals Yes, proceed to check Number of Visits.
5. Check Number of Visits:
 - a. If Two Visits Over the Last Two Years With at Least One Visit in the Last 12 Months equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Two Visits Over the Last Two Years With at Least One Visit in the Last 12 Months equals Yes, Proceed to check Other Patient Diagnosis.
6. Check Other Patient Diagnosis:
 - a. If Patient Diagnosis of Chronic Obstructive Pulmonary Disease, Emphysema, Cystic Fibrosis or Acute Respiratory Failure as Listed in Denominator equals No, proceed to check Patient Died Prior to Measurement Period.
 - b. If Chronic Obstructive Pulmonary Disease, Emphysema, Cystic Fibrosis or Acute Respiratory Failure as Listed in Denominator equals Yes, do not include in Eligible Patient Population. Stop Processing
7. Check Patient Died Prior to Measurement Period:
 - a. If Patient Died Prior to Measurement Period equals No, proceed to check Patient was a Permanent Nursing Home Resident.

- b. If Patient Died Prior to Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
8. Check Patient was a Permanent Nursing Home Resident:
- a. If Patient was a Permanent Nursing Home Resident equals No, proceed to check Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period.
 - b. If Patient was a Permanent Nursing Home Resident equals Yes, do not include in Eligible Patient Population. Stop Processing.
9. Check Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period:
- a. If Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period equals No, proceed to include in the Eligible population.
 - b. If Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
10. Denominator Population:
- a. Denominator population is all Eligible Patients in the denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d1 equals 8patients in the sample calculation.
11. Start Numerator Component 1- Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.
12. Check Asthma Well-Controlled Based on the ACT, C-ACT, ACQ, or ATAQ Score and Results Documented:
- a. If Asthma Well-Controlled Based on the ACT, C-ACT, ACQ, or ATAQ Score and Results Documented equals Yes, include in Data Completeness Met and Performance Met.
 - b. Data Completeness Met and Performance Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a1 equals 5 patients in Sample Calculation.
 - c. If Asthma Well-Controlled Based on the ACT, C-ACT, ACQ, or ATAQ Score and Results Documented equals No, proceed to check Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given.
13. Check Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given:
- a. If Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given equals Yes, include in Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter c1 equals 2 patients in the Sample Calculation.

- c. If Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given equals No, proceed to Data Completeness Not Met.
14. Check Data Completeness Not Met:
- a. If Data Completeness Not Met, the Quality Data Code or equivalent was not reported. Letter e1 equals 1 patient has been subtracted from the data completeness numerator in sample calculation.
15. Start Numerator Component 2 - Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator
16. Check Total Number of Emergency Department Visits and Inpatient Hospitalizations Less Than Two in the Past 12 Months:
- a. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Less Than Two in the Past 12 Months equals Yes, include in Data Completeness Met and Performance Met.
 - b. Data Completeness Met and Performance Met letter is represented as Data Completeness in the Sample Calculation listed at the end of this document. Letter a2 equals 6 patients in the Sample Calculation.
 - c. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Less Than Two in the Past 12 Months equals No, proceed to check Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given.
17. Check Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given:
- a. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given equals Yes, include in Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented as Data Completeness in the Sample Calculation listed at the end of this document. Letter c2 equals 1 patient in the Sample Calculation.
 - c. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given equals No, proceed to Data Completeness Not Met.
18. Check Data Completeness Not Met:
- a. If Data Completeness Not Met, the Quality Data Code or equivalent was not reported. Letter e2 equals 1 patient has been subtracted from the data completeness numerator in sample calculation.

2017 Registry Individual Measure Flow
#398: Optimal Asthma Control

This Measure Requires Data Completeness of Seven Performance Rates

Please refer to the specific section of the Measure Specification to identify the denominator and numerator information for use in reporting this Individual Measure.

Reporting Criteria 2:

1. Start with Denominator
2. Check Patient Age:
 - a. If the Age is 18 thru 50 years of age at Date of Service and equals No during the measurement period, do not include in Eligible Patient Population. Stop Processing.
 - b. If the Age is 18 thru 50 years of age at Date of Service and equals Yes during the measurement period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:
 - a. If Diagnosis of Asthma as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Asthma as Listed in the Denominator equals Yes, proceed to Check Other Patient Diagnosis.
4. Check Encounter Performed:
 - a. If Encounter as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Encounter as Listed in the Denominator equals Yes, proceed to check Number of Visits.
5. Check Number of Visits:
 - a. If Two Visits Over the Last Two Years With at Least One Visit in the Last 12 Months equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Two Visits Over the Last Two Years With at Least One Visit in the Last 12 Months equals Yes, Proceed to check Other Patient Diagnosis.
6. Check Other Patient Diagnosis:
 - a. If Patient Diagnosis of Chronic Obstructive Pulmonary Disease, Emphysema, Cystic Fibrosis or Acute Respiratory Failure as Listed in Denominator equals No, proceed to check Patient Died Prior to Measurement Period.
 - b. If Chronic Obstructive Pulmonary Disease, Emphysema, Cystic Fibrosis or Acute Respiratory Failure as Listed in Denominator equals Yes, do not include in Eligible Patient Population. Stop Processing
7. Check Patient Died Prior to Measurement Period:
 - a. If Patient Died Prior to Measurement Period equals No, proceed to check Patient was a Permanent Nursing Home Resident.

- b. If Patient Died Prior to Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
8. Check Patient was a Permanent Nursing Home Resident:
- a. If Patient was a Permanent Nursing Home Resident equals No, proceed to check Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period.
 - b. If Patient was a Permanent Nursing Home Resident equals Yes, do not include in Eligible Patient Population. Stop Processing.
9. Check Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period:
- a. If Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period equals No, proceed to include in the Eligible population.
 - b. If Patient was in Hospice or Receiving Palliative Care Services at Any Time During the Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
10. Denominator Population:
- a. Denominator population is all Eligible Patients in the denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d2 equals 8 patients in the sample calculation.
11. Start Numerator Component 1- Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.
12. Check Asthma Well-Controlled Based on the ACT, C-ACT, ACQ, or ATAQ Score and Results Documented:
- a. If Asthma Well-Controlled Based on the ACT, C-ACT, ACQ, or ATAQ Score and Results Documented equals Yes, include in Data Completeness Met and Performance Met.
 - b. Data Completeness Met and Performance Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a3 equals 3 patients in Sample Calculation.
 - c. If Asthma Well-Controlled Based on the ACT, C-ACT, ACQ, or ATAQ Score and Results Documented equals No, proceed to check Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given.
13. Check Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given:
- a. If Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given equals Yes, include in Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter c3 equals 2 patients in the Sample Calculation.

- c. If Asthma Not Well Controlled Based on ACT, C-ACT, ACQ, or ATAQ Score or Specified Asthma Control Tool Not Used, Reason Not Given equals No, proceed to Data Completeness Not Met.
14. Check Data Completeness Not Met:
- a. If Data Completeness Not Met, the Quality Data Code or equivalent was not reported. Letter e3 equals 1 patient has been subtracted from the data completeness numerator in sample calculation.
15. Start Numerator Component 2 - Each component should be reported in order to determine the data completeness and performance rate for the overall percentage of patients that meet ALL targets represented as the numerator.
16. Check Total Number of Emergency Department Visits and Inpatient Hospitalizations Less Than Two in the Past 12 Months:
- a. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Less Than Two in the Past 12 Months equals Yes, include in Data Completeness Met and Performance Met.
 - b. Data Completeness Met and Performance Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a4 equals 4 patients in the Sample Calculation.
 - c. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Less Than Two in the Past 12 Months equals No, proceed to check Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given.
17. Check Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given:
- a. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given equals Yes, include in Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter c4 equals 2 patients in the Sample Calculation.
 - c. If Total Number of Emergency Department Visits and Inpatient Hospitalizations Equal to or Greater than Two in the Past 12 Months OR Patient Not Screened, Reason Not Given equals No, proceed to Data Completeness Not Met.
18. Check Data Completeness Not Met:
- a. If Data Completeness Not Met, the Quality Data Code or equivalent was not reported. Letter e4 equals 1 patient has been subtracted from the data completeness numerator in sample calculation.

Sample Calculations:

1. Patient 1
 - a. Patient 1 met Numerator component 1 (represented by a^1)
 - b. Patient 1 met Numerator component 2 (represented by a^2)
2. Patient 2
 - a. Patient 2 met Numerator component 1 (represented by a^1)
 - b. Patient 2 met Numerator component 2 (represented by a^2)
3. Patient 3
 - a. Patient 3 met Numerator component 1 (represented by a^1)
 - b. Patient 3 met Numerator component 2 (represented by a^2)
4. Patient 4
 - a. Patient 4 met Numerator component 1 (represented by a^1)
 - b. Patient 4 met Numerator component 2 (represented by a^2)
5. Patient 5
 - a. Patient 5 met Numerator component 1 (represented by a^1)
 - b. Patient 5 met Numerator component 2 (represented by a^2)
6. Patient 6
 - a. Patient 6 did not meet Numerator component 1 (represented by c^1)
 - b. Patient 6 did meet Numerator component 2 (represented by a^2)
7. Patient 7
 - a. Patient 7 did not meet Numerator component 1 (represented by c^1)
 - b. Patient 7 did not meet Numerator component 2 (represented by c^2)
8. Patient 8
 - a. Patient 8 not reported for Numerator component 1 (represented by e^1)
 - b. Patient 8 not reported for Numerator component 2 (represented by e^2)
9. Patient 9
 - a. Patient 9 met Numerator component 1 (represented by a^3)
 - b. Patient 9 met Numerator component 2 (represented by a^4)
10. Patient 10

- a. Patient 10 did not meet Numerator component 1 (represented by c³)
 - b. Patient 10 did not meet Numerator component 2 (represented by c⁴)
11. Patient 11
- a. Patient 11 met Numerator component 1 (represented by a³)
 - b. Patient 11 met Numerator component 2 (represented by a⁴)
12. Patient 12
- a. Patient 12 not reported for Numerator component 1 (represented by e³)
 - b. Patient 12 not reported for Numerator component 2 (represented by e⁴)
13. Patient 13
- a. Patient 13 met Numerator component 1 (represented by a³)
 - b. Patient 13 met Numerator component 2 (represented by a⁴)
14. Patient 14
- a. Patient 14 not reported for Numerator component 1 (represented by e³)
 - b. Patient 14 met Numerator component 2 (represented by a⁴)
15. Patient 15
- a. Patient 15 did not meet Numerator component 1 (represented by c³)
 - b. Patient 15 did not meet Numerator component 2 (represented by c⁴)
16. Patient 16
- a. Patient 16 not reported for Numerator component 1 (represented by e³)
 - b. Patient 16 not reported for Numerator component 2 (represented by e⁴)

SAMPLE CALCULATIONS: Data Completeness One****

Data Completeness=

$$\frac{\text{Performance Met (a}^1\text{=6 patients) + Performance Not Met (c}^1\text{=2 patients)}}{\text{Eligible Population / Denominator (d}^1\text{=8 patients)}} = \frac{7 \text{ patients}}{8 \text{ patients}} = 87.50\%$$

SAMPLE CALCULATIONS: Data Completeness Two****

Data Completeness=

$$\frac{\text{Performance Met (a}^2\text{=6 patients) + Performance Not Met (c}^2\text{=1 patients)}}{\text{Eligible Population / Denominator (d}^1\text{=8 patients)}} = \frac{7 \text{ patients}}{8 \text{ patients}} = 87.50\%$$

SAMPLE CALCULATIONS: Data Completeness Three****

Data Completeness=

$$\frac{\text{Performance Met (a}^3\text{=3 patients) + Performance Not Met (c}^3\text{=2 patients)}}{\text{Eligible Population / Denominator (d}^2\text{=8 patients)}} = \frac{5 \text{ patients}}{8 \text{ patients}} = 62.50\%$$

SAMPLE CALCULATIONS: Data Completeness Four****

Data Completeness=

$$\frac{\text{Performance Met (a}^4\text{=4 patients) + Performance Not Met (c}^4\text{=2 patients)}}{\text{Eligible Population / Denominator (d}^2\text{=8 patients)}} = \frac{6 \text{ patients}}{8 \text{ patients}} = 75.00\%$$

SAMPLE CALCULATION: Performance Rate One: Overall Percentage for patients (aged 5-50 years) with well-controlled asthma, without elevated risk of exacerbation

Reporting Criteria 1 and 2:

Performance Rate=

$$\frac{\text{Performance Met (a=8 patients)}}{\text{Data Completeness Numerator (12 patients)}} = \frac{8 \text{ patients}}{12 \text{ patients}} = 66.67\%$$

SAMPLE CALCULATION: Performance Rate Two: Percentage of pediatric patients (aged 5-17 years) with well-controlled asthma, without elevated risk of exacerbation

Reporting Criteria 1, Component 1 and 2:

Performance Rate=

$$\frac{\text{Performance Met (a=5 patients)}}{\text{Data Completeness Numerator (7 patients)}} = \frac{5 \text{ patients}}{7 \text{ patients}} = 71.43\%$$

SAMPLE CALCULATION: Performance Rate Three: Percentage of adult patients (aged 18-50 years) with well-controlled asthma, without elevated risk of exacerbation

Reporting Criteria 2, Component 1 and 2:

Performance Rate=

$$\frac{\text{Performance Met (a=3 patients)}}{\text{Data Completeness Numerator (5 patients)}} = \frac{3 \text{ patients}}{5 \text{ patients}} = 60.00\%$$

SAMPLE CALCULATION: Performance Rate Four: Asthma well-controlled (take the most recent- ACT) for patients 5 to 17 with Asthma

Reporting Criteria 1, Component 1:

Performance Rate=

$$\frac{\text{Performance Met (a}^1\text{=5 patients)}}{\text{Data Completeness Numerator (7 patients)}} = \frac{5 \text{ patients}}{7 \text{ patients}} = 71.43\%$$

SAMPLE CALCULATION: Performance Rate Five: Asthma well-controlled (take the most recent ACT) for patients 18 to 50 with Asthma

Reporting Criteria 2, Component 1:

Performance Rate=

$$\frac{\text{Performance Met (a}^2\text{=3 patients)}}{\text{Data Completeness Numerator (5 patients)}} = \frac{3 \text{ patients}}{5 \text{ patients}} = 60.00\%$$

SAMPLE CALCULATION: Performance Rate Six: Patient not at elevated risk of exacerbation for patients 5 to 17 with Asthma

Reporting Criteria 1, Component 2:

Performance Rate=

$$\frac{\text{Performance Met (a}^2\text{=6 patients)}}{\text{Data Completeness Numerator - (7 patients)}} = \frac{6 \text{ patients}}{7 \text{ patients}} = 85.71\%$$

SAMPLE CALCULATION: Performance Rate Seven: Patient not at elevated risk of exacerbation for patients 18 to 50 with Asthma

Reporting Criteria 2, Component 2:

Performance Rate=

$$\frac{\text{Performance Met (a=4 patients)}}{\text{Data Completeness Numerator (6 patients)}} = \frac{4 \text{ patients}}{6 \text{ patients}} = 60.00\%$$