

Quality ID #394 (NQF 1407): Immunizations for Adolescents – National Quality Strategy Domain: Community/Population Health

2018 OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

MEASURE TYPE:
Process

DESCRIPTION:
The percentage of adolescents 13 years of age who had the recommended immunizations by their 13th birthday

INSTRUCTIONS:
This measure is to be submitted a minimum of **once per performance period** for patients seen during the performance period. There is no diagnosis associated with this measure. Performance for this measure is not limited to the performance period. This measure may be submitted by eligible clinicians who perform the quality actions described in the measure based on services provided and the measure-specific denominator coding

This measure will be calculated with 4 performance rates:

- 1) Patients who had one dose of meningococcal vaccine on or between the patient's 11th and 13th birthdays
- 2) Patients who had one tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap) on or between the patient's 10th and 13th birthdays
- 3) Patients who have completed the HPV vaccine series with different dates of service on or between the patient's 9th and 13th birthdays
- 4) All patients who are compliant for Meningococcal, Tdap and HPV during the specified timeframes.

Measure Submission:

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.

DENOMINATOR (SUBMISSION CRITERIA FOR ALL RATES):
Adolescents who turn 13 years of age during the measurement period

DENOMINATOR NOTE: The same denominator is used for all rates.

Denominator Criteria (Eligible Cases):

Patients who turn 13 years of age during the measurement period

AND

Patient encounter during the performance period (CPT or HCPCS): 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, G0402

AND NOT

DENOMINATOR EXCLUSIONS:

Meningococcal, Tdap and/or HPV vaccine contraindicated OR patient allergic to the meningococcal, Tdap, and/or HPV vaccine

OR

Patients who use hospice services any time during the measurement period: G9761

NUMERATOR (SUBMISSION CRITERIA 1):

Adolescents who had one dose of meningococcal vaccine on or between the patient's 11th and 13th birthdays

Numerator Options:

Performance Met:

Patient had one dose of meningococcal vaccine on or between the patient's 11th and 13th birthdays (G9414)

OR

Performance Not Met:

Patient did not have one dose of meningococcal vaccine on or between the patient's 11th and 13th birthdays (G9415)

NUMERATOR (SUBMISSION CRITERIA 2):

Adolescents who had one tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap) on or between the patient's 10th and 13th birthdays

Numerator Options:

Performance Met:

Patient had one tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap) on or between the patient's 10th and 13th birthdays (G9416)

OR

Performance Not Met:

Patient did not have one tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap) on or between the patient's 10th and 13th birthdays (G9417)

NUMERATOR (SUBMISSION CRITERIA 3):

Adolescents who had at least three HPV vaccines on or between the patient's 9th and 13th birthdays

Numerator Options:

Performance Met:

Patient had at least two HPV vaccines (with at least 146 days between the two) OR three HPV vaccines on or between the patient's 9th and 13th birthdays (G9762)

OR

Performance Not Met:

Patient did not have at least two HPV vaccines (with at least 146 days between the two) OR three HPV vaccines on or between the patient's 9th and 13th birthdays (G9763)

NUMERATOR (SUBMISSION CRITERIA 4):

Adolescents who are numerator compliant for Rates 1, 2 and 3

RATIONALE:

Adolescent immunization rates have historically lagged behind early childhood immunization rates in the United States. In 2000, the American Academy of Pediatrics (AAP) reported that 3 million adolescents failed to receive at least one recommended vaccination. Low immunization rates among adolescents have the potential to cause outbreaks of preventable diseases and to establish reservoirs of disease in adolescents that can affect other populations including infants, the elderly, and individuals with chronic conditions. Immunization recommendations for adolescents have changed in recent years. In addition to assessing for immunizations that may have been missed, there are new vaccines targeted specifically to adolescents.

This measure follows the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP) guidelines for immunizations.

CLINICAL RECOMMENDATION STATEMENTS:

Receiving recommended vaccinations is the best defense against vaccine-preventable diseases. However, as children get older, the protection they received from some of their childhood vaccinations begins to wear off and they need booster shots. Adolescents are also at risk for vaccine-preventable diseases (e.g., meningococcal meningitis) they are not typically vaccinated against as children.

The tetanus, diphtheria toxoids and acellular pertussis (Tdap) vaccine is given to adolescents as a booster shot to increase the protection they received in childhood vaccinations. Diphtheria, tetanus and pertussis are serious diseases that can cause life-threatening illnesses. Diphtheria can cause breathing difficulties, heart problems, nerve damage, pneumonia and even death. Tetanus can cause seizures and severe muscle spasms that can be strong enough to cause bone fractures of the spine, and causes death in 30 to 40 percent of cases. Pertussis can cause severe coughing spells that can interfere with breathing, as well as pneumonia, long-lasting bronchitis, seizures, brain damage and death.

Meningococcal disease occurs when the protective membranes covering the brain and spinal cord become infected and swell, and can cause serious complications, such as brain damage, hearing loss or learning disabilities.

Meningococcal disease is caused by the bacterium *Neisseria meningitidis*, or meningococcus, and is the leading cause of bacterial meningitis in the United States (U.S.).

A meningococcal infection can spread quickly, killing an otherwise healthy adolescent in 48 hours. Although not all cases of meningococcal disease progress into meningitis, 15 percent of the cases that do progress, result in death.

Each year, many adolescents miss their recommended vaccinations, leaving them needlessly vulnerable to disease, suffering and death.

Vaccine-preventable diseases are expensive for society as a whole, costing more than \$10 billion in direct medical costs and indirect societal costs.

In 2012, pertussis outbreaks were reported in a majority of states, with more than 32,000 cases and 16 deaths.

Outbreaks can occur in workplaces, schools and homes, and can result in physical, economic and social costs.

Bacterial meningitis remains a major global health threat, with an estimated 500,000 cases reported worldwide each year, accounting for at least 50,000 deaths. According to preliminary data, meningitis was responsible for 606 deaths in the U.S. in 2011.

Vaccines are a safe and effective way to protect adolescents against potentially deadly diseases and help them develop into healthy adults. Vaccines can protect their family and their community as well.

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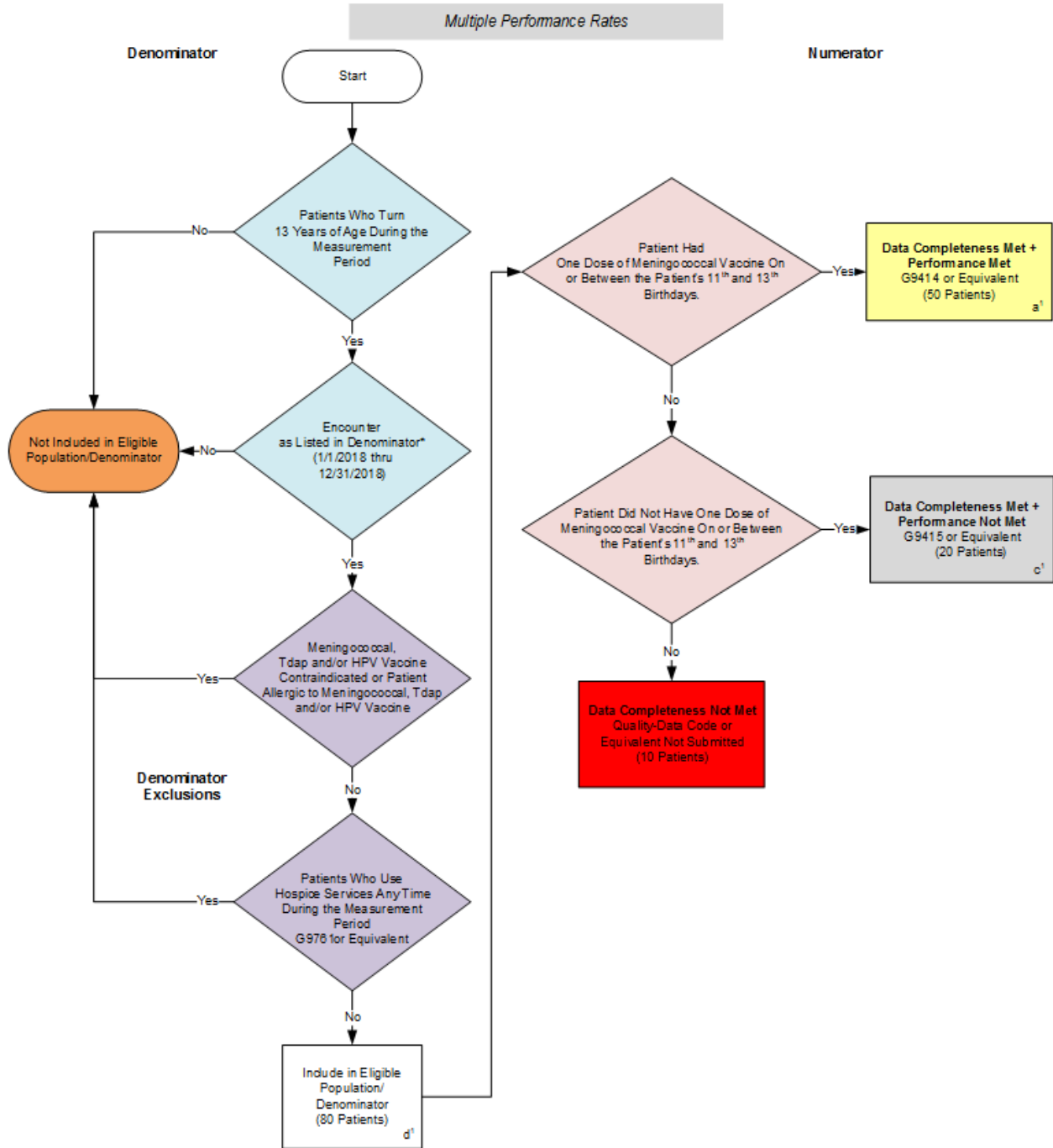
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2018 Registry Flow for Quality ID #394 NQF 1407: Immunization for Adolescents Submission Criteria One

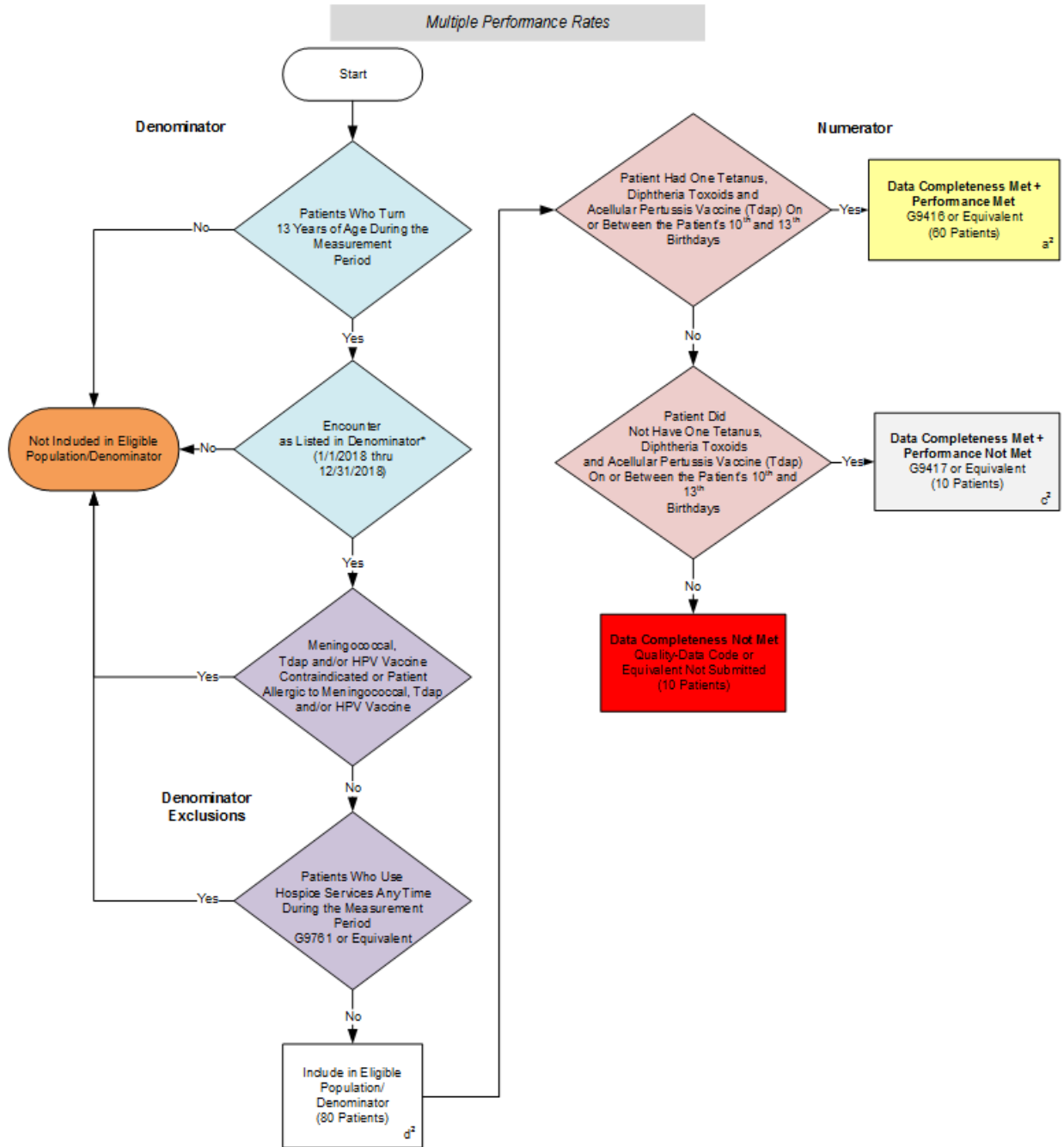


This measure will be calculated with 4 performance rates.
 *See the posted Measure Specification for specific coding and instructions to submit this measure.
 **It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.
 NOTE: Submission Frequency: Patient - process

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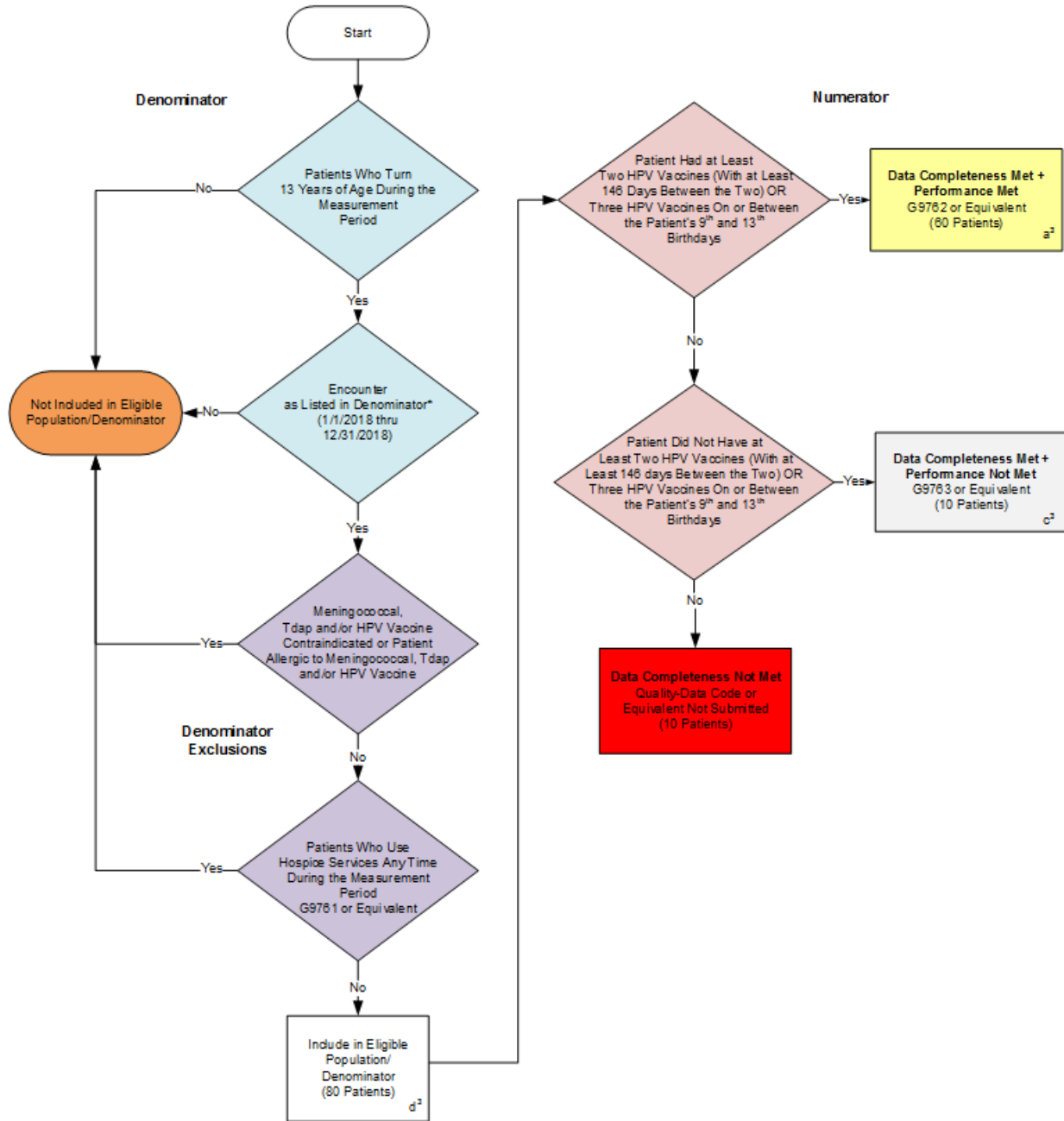
2018 Registry Flow for Quality ID #394 NQF 1407: Immunization for Adolescents Submission Criteria Two



This measure will be calculated with 4 performance rates
 *See the posted Measure Specification for specific coding and instructions to submit this measure.
 **It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.
 NOTE: Submission Frequency: Patient - process

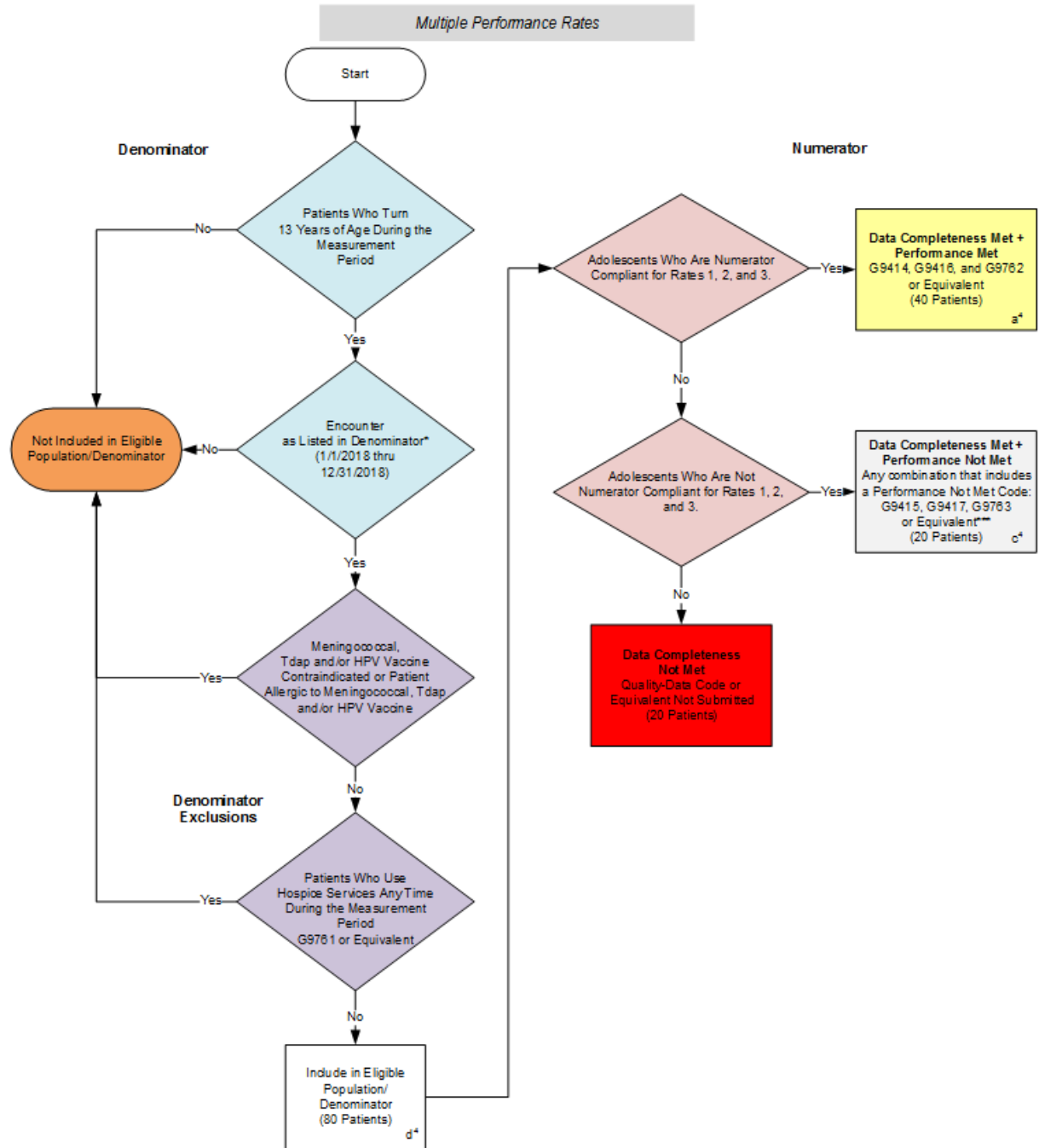
2018 Registry Flow for Quality ID #394 NQF 1407: Immunization for Adolescents Submission Criteria Three

Multiple Performance Rates



This measure will be calculated with 4 performance rates
 *See the posted Measure Specification for specific coding and instructions to submit this measure.
 **It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.
 NOTE: Submission Frequency: Patient - process

2018 Registry Flow for Quality ID #394 NQF 1407: Immunization for Adolescents Submission Criteria Four



This measure will be calculated with 4 performance rates.
 *See the posted Measure Specification for specific coding and instructions to submit this measure.
 **It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.
 ***To satisfy Data Completeness for Submission Criteria 4, the registry must ensure that the eligible clinician submits on Submission Criteria One, Two, and Three. In order to meet performance on this measure, Submission Criteria One, Two, and Three must submit G9414, G9416, and G9782.
 NOTE: Submission Frequency: Patient - process

2018 Registry Flow for Quality ID #394 NQF 1407: Immunization for Adolescents

Multiple Performance Rates

SAMPLE CALCULATION S: Data Completeness and Performance Rate 1

Data Completeness=

$$\frac{\text{Performance Met (a}^1\text{= 50 patients)} + \text{Performance Not Met (c}^1\text{=20 patients)}}{\text{Eligible Population / Denominator (d}^1\text{=80 patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^1\text{ = 50 patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{50 \text{ patients}}{70 \text{ patients}} = 71.43\%$$

SAMPLE CALCULATION S: Data Completeness and Performance Rate 2

Data Completeness=

$$\frac{\text{Performance Met (a}^2\text{= 60 patients)} + \text{Performance Not Met (c}^2\text{=10 patients)}}{\text{Eligible Population / Denominator (d}^2\text{=80 patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^2\text{ = 60 patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{60 \text{ patients}}{70 \text{ patients}} = 85.71\%$$

SAMPLE CALCULATION S: Data Completeness and Performance Rate 3

Data Completeness=

$$\frac{\text{Performance Met (a}^3\text{= 60 patients)} + \text{Performance Not Met (c}^3\text{=10 patients)}}{\text{Eligible Population / Denominator (d}^3\text{=80 patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^3\text{ = 60 patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{60 \text{ patients}}{70 \text{ patients}} = 85.71\%$$

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8
Numerator Criteria 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
Numerator Criteria 2	Met (a ²)	Met (a ²)	Met (a ²)	Met (a ²)	Met (a ²)	Not Met (c ²)	Met (a ²)	Not Reported
Numerator Criteria 3	Met (a ³)	Not Reported	Met (a ³)	Met (a ³)	Met (a ³)	Met (a ³)	Not Met (c ³)	Met (a ³)
Numerator Criteria 4	Met (a ⁴)	Not Reported	Met (a ⁴)	Met (a ⁴)	Met (a ⁴)	Not Met (c ⁴)	Not Met (c ⁴)	Not Reported

SAMPLE CALCULATION S: Data Completeness and Performance Rate 4

Data Completeness=

$$\frac{\text{Performance Met (a}^4\text{= 40 patients)} + \text{Performance Not Met (c}^4\text{=20 patients)}}{\text{Eligible Population / Denominator (d}^4\text{=80 patients)}} = \frac{60 \text{ patients}}{80 \text{ patients}} = 75.00\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^4\text{ = 40 patients)}}{\text{Data Completeness Numerator (60 patients)}} = \frac{40 \text{ patients}}{60 \text{ patients}} = 66.67\%$$

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

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

NOTE: Submission Frequency: Patient – process

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**2018 Registry Flow For Quality ID
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Please refer to the specific section of the specification to identify the denominator and numerator information for use in submitting this Individual Specification. This flow is for registry data submission. This measure includes 4 performance rates for submission.

SUBMISSION CRITERIA 1:

1. Start with Denominator
2. Check Patient Age:
 - a. If Patients Who Turn 13 Years of Age During the Measurement Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Patients Who Turn 13 Years of Age During the Measurement Period equals Yes, proceed to check Encounter Performed.
3. 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 Not Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine.
4. Check Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine:
 - a. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals No, proceed to check Patients Who Use Hospice Services Any Time During the Measurement Period.
5. Check Patients Who Use Hospice Services Any Time During the Measurement Period:
 - a. If Patients Who Use Hospice Services Any Time During the Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Patients Who Use Hospice Services Any Time During the Measurement Period equals No, include in Eligible Population.
6. 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 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Patient Had One Dose of Meningococcal Vaccine On or Between the Patient's 11th and 13th Birthdays:
 - a. If Patient had One Dose of Meningococcal Vaccine On or Between the Patient's 11th and 13th Birthdays 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 50 patients in the Sample Calculation.
 - c. If Patient Had One Dose of Meningococcal Vaccine On or Between the Patient's 11th and 13th Birthdays equals No, proceed to check Patient Did Not Have One Dose of Meningococcal Vaccine On or Between the Patient's 11th and 13th Birthdays.
9. Check Patient Did Not have One Dose of Meningococcal Vaccine On or Between the Patient's 11th and 13th Birthdays:
- a. If Patient Did Not Have One Dose of Meningococcal Vaccine on or Between the Patient's 11th and 13th Birthday equals Yes, include in the Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented as Data Completeness Rate in the Sample Calculation listed at the end of this document. Letter c¹ equals 20 patients in the Sample Calculation.
 - c. If Patient Did Not Have One Dose of Meningococcal Vaccine On or Between the Patient's 11th and 13th Birthdays equals No, proceed to Data Completeness Not Met.
10. Check Data Completeness Not Met:
- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. This is represented by 10 patients in the Sample Calculation.

SAMPLE CALCULATIONS: Data Completeness and Performance Rate 1

Data Completeness=

$$\frac{\text{Performance Met (a}^1 = 50 \text{ patients)} + \text{Performance Not Met (c}^1 = 20 \text{ patients)}}{\text{Eligible Population / Denominator (d}^1 = 80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^1 = 50 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{50 \text{ patients}}{70 \text{ patients}} = 71.43\%$$

**2018 Registry Flow For Quality ID
#394 NQF 1407: Immunization for Adolescents**

Please refer to the specific section of the specification to identify the denominator and numerator information for use in submitting this Individual Specification. This flow is for registry data submission. This measure includes 4 performance rates for submission.

SUBMISSION CRITERIA 2:

1. Start with Denominator
2. Check Patient Age:
 - a. If Patients Who Turns 13 Years of Age During the Measurement Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Patients Who Turns 13 Years of Age During the Measurement Period equals Yes, proceed to check Encounter Performed.
3. 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 Not Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine.
4. Check Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine:
 - a. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals No, proceed to check Patients Who Use Hospice Services Any Time During the Measurement Period.
5. Check Patients Who Use Hospice Services Any Time During the Measurement Period:
 - a. If Patients Who Use Hospice Services Any Time During the Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Patients Who Use Hospice Services Any Time During the Measurement Period equals No, include in Eligible Population.
6. 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 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Patient Had One Tetanus, Diphtheria Toxoids and Acellular Pertussis Vaccine (Tdap) On or Between the Patient's 10th and 13th Birthdays:

- a. If Patient Had One Tetanus, Diphtheria Toxoids and Acellular Pertussis Vaccine (Tdap) On or Between the Patient's 10th and 13th Birthdays 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 a² equals 60 patients in the Sample Calculation.
 - c. If Patient Had One Tetanus, Diphtheria Toxoids and Acellular Pertussis Vaccine (Tdap) On or Between the Patient's 10th and 13th Birthday equals No, proceed to check Patient Did Not have One Tetanus, Diphtheria Toxoids and Acellular Pertussis Vaccine (Tdap) On or Between the Patient's 10th and 13th Birthdays.
9. Check Patient Did Not have One Tetanus, Diphtheria Toxoids and Acellular Pertussis Vaccine (Tdap) On or Between the Patient's 10th and 13th Birthdays:
- a. If Patient Did Not have One Tetanus, Diphtheria Toxoids and Acellular Pertussis Vaccine (Tdap) On or Between the Patient's 10th and 13th Birthdays equals Yes, include in the 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 10 patients in the Sample Calculation.
 - c. If Patient Did Not Have One Tetanus, Diphtheria Toxoids and Acellular Pertussis Vaccine (Tdap) On or Between the Patient's 10th and 13th Birthdays equals No, proceed to check Data Completeness Not Met.
10. Check Data Completeness Not Met:
- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. This is represented by 10 patients in the Sample Calculation.

SAMPLE CALCULATIONS: Data Completeness and Performance Rate 2

Data Completeness=

$$\frac{\text{Performance Met (a}^2 = 60 \text{ patients)} + \text{Performance Not Met (c}^2 = 10 \text{ patients)}}{\text{Eligible Population / Denominator (d}^2 = 80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^2 = 60 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{60 \text{ patients}}{70 \text{ patients}} = 85.71\%$$

**2018 Registry Flow For Quality Id
#394 NQF 1407: Immunization for Adolescents**

Please refer to the specific section of the specification to identify the denominator and numerator information for use in submitting this Individual Specification. This flow is for registry data submission. This measure includes 4 performance rates for submission.

SUBMISSION CRITERIA 3:

1. Start with Denominator
2. Check Patient Age:
 - a. If Patients Who Turn 13 Years of Age During the Measurement Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Patients Who Turn 13 Years of Age During the Measurement Period equals Yes, proceed to check Encounter Performed.
3. 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 Not Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine.
4. Check Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine:
 - a. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals No, proceed to check Hospice Services for Patient Starts Any Time During the Measurement Period.
5. Check Hospice Services for Patient Starts Any Time During the Measurement Period:
 - a. If Hospice Services for Patient Starts Any Time During the Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Hospice Services for Patient Starts Any Time During the Measurement Period equals No, include in Eligible Population.
6. 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 d³ equals 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Patient Had at Least Two HPV vaccines (With at Least 146 Days Between the Two) OR Three HPV Vaccines On or Between the Patient's 9th and 13th Birthdays:

- a. If Patient Had at Least Two HPV Vaccines (With at Least 146 Days Between the Two) OR Three HPV Vaccines On or Between the Patient's 9th and 13th Birthdays 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 60 patients in the Sample Calculation.
 - c. If Patient Had at Least Two HPV Vaccines (With at Least 146 Days Between the Two) OR Three HPV Vaccines On or Between the Patient's 9th and 13th Birthdays equals No, proceed to check Patient Did Not Have at Least Three HPV Vaccines On or Between the Patient's 9th and 13th Birthdays.
9. Check Patient Did Not Have at Least Two HPV Vaccines (With at Least 146 Days Between the Two) OR Three HPV Vaccines On or Between the Patient's 9th and 13th Birthdays:
- a. If Patient Did Not Have at Least two HPV vaccines (With at Least 146 Days Between the Two) OR Three HPV Vaccines On or Between the Patient's 9th and 13th Birthdays equals Yes, include in the Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented as Data Completeness Rate in the Sample Calculation listed at the end of this document. Letter c³ equals 10 patients in the Sample Calculation.
 - c. If Patient Did Not Have One Dose of Meningococcal Vaccine On or Between the Patient's 11th and 13th Birthdays equals No, proceed to Data Completeness Not Met.
10. Check Data Completeness Not Met:
- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. This is represented by 10 patients in the Sample Calculation.

SAMPLE CALCULATIONS: Data Completeness and Performance Rate 3

Data Completeness=

$$\frac{\text{Performance Met (a}^3= 60 \text{ patients)} + \text{Performance Not Met (c}^3=10 \text{ patients)}}{\text{Eligible Population / Denominator (d}^3=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^3= 60 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{60 \text{ patients}}{70 \text{ patients}} = 85.71\%$$

**2018 Registry Flow For Quality ID
#394 NQF 1407: Immunization for Adolescents**

Please refer to the specific section of the specification to identify the denominator and numerator information for use in submitting this Individual Specification. This flow is for registry data submission. This measure includes 4 performance rates for submission.

SUBMISSION CRITERIA 4:

1. Start with Denominator
2. Check Patient Age:
 - a. If Patients Who Turns 13 Years of Age During the Measurement Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Patients Who Turns 13 Years of Age During the Measurement Period equals Yes, proceed to check Encounter Performed.
3. 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 Not Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine.
4. Check Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine:
 - a. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Meningococcal, Tdap and/or HPV Vaccine Contraindicated or Patient Allergic to Meningococcal, Tdap and/or HPV Vaccine equals No, proceed to check Hospice Services for patient Starts Any Time During the Measurement Period.
5. Check Hospice Services for Patient Starts Any Time During the Measurement Period:
 - a. If Hospice Services for Patient Starts Any Time During the Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Hospice Services for Patient Starts Any Time During the Measurement Period equals No, include in Eligible Population.
6. 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 d⁴ equals 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Adolescents Who Are Numerator Compliant for Rates 1, 2, and 3:

- a. If Adolescents Who Are Numerator Compliant for Rates 1, 2, and 3 equals Yes, include in the 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 a⁴ equals 40 patients in the Sample Calculation.
 - c. If Adolescents Who Are Numerator Compliant for Rates 1, 2, and 3 equals No, proceed to check Adolescents Who Are Not Numerator Compliant for Rates 1 and 2.
9. Check Adolescents Who Are Not Numerator Compliant for Rates 1, 2, and 3:
- a. If Adolescents Who Are Not Numerator Compliant for Rates 1, 2, and 3 equals Yes, include in the 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 c⁴ equals 20 patients in the Sample Calculation.
 - c. If Adolescents Who Are Not Numerator Compliant for Rates 1, 2, and 3 equals No, proceed to Data Completeness Not Met.
10. Check Data Completeness Not Met:
- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. This is represented by 20 patients in the Sample Calculation.

SAMPLE CALCULATIONS: Data Completeness and Performance Rate 4

Data Completeness=

$$\frac{\text{Performance Met (a}^4 = 40 \text{ patients)} + \text{Performance Not Met (c}^4 = 20 \text{ patients)}}{\text{Eligible Population / Denominator (d}^4 = 80 \text{ patients)}} = \frac{60 \text{ patients}}{80 \text{ patients}} = 75.00\%$$

Performance Rate=

$$\frac{\text{Performance Met (a}^4 = 40 \text{ patients)}}{\text{Data Completeness Numerator (60 patients)}} = \frac{40 \text{ patients}}{60 \text{ patients}} = 66.67\%$$