This form contains the information submitted by measure developers/stewards, organized according to NQF’s measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the submitting standards web page.

<table>
<thead>
<tr>
<th>Measure Title:</th>
<th>HIV/AIDS: HIV RNA Control After Six Months of Potent Antiretroviral Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure Steward:</td>
<td>National Committee for Quality Assurance</td>
</tr>
</tbody>
</table>
| Brief Description of Measure: | Percentage of patients aged 13 years and older with a diagnosis of HIV/AIDS, who had at least two medical visits during the measurement year, with at least 90 days between each visit, who are receiving potent antiretroviral therapy*, who have a viral load <200 copies/mL after at least 6 months of potent antiretroviral therapy* *

*Potent antiretroviral therapy is described as any antiretroviral therapy that has demonstrated optimal efficacy and results in durable suppression of HIV as shown by prior clinical trials |

| Numerator Statement: | Patients with an HIV viral load <200 copies/mL |

| Denominator Statement: | All patients aged 13 years or older with a diagnosis of HIV/AIDS, with at least two visits in the measurement year, with at least 90 days between each visit, who received potent antiretroviral therapy* for at least 6 months |

Definition of "Medical Visit" - any visit with a health care professional who provides routine primary care for the patient with HIV/AIDS (may be but is not limited to a primary care clinician, ob/gyn, pediatrician, infectious diseases specialist)

*Potent antiretroviral therapy is described as any antiretroviral therapy that has demonstrated optimal efficacy and results in durable suppression of HIV as shown by prior clinical trials |

| Denominator Exclusions: | None |

| Measure Type: | Outcome |

| Data Source: | Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy |

| Level of Analysis: | Clinician : Group/Practice, Clinician : Individual, Population : County or City |

| Is this measure paired with another measure? | No |

| If included in a composite, please identify the composite measure (title and NQF number if endorsed): | N/A |

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
Created on: 07/16/2012 at 02:46 PM
1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (check De.5):

5. Similar/related endorsed or submitted measures (check 5.1):

Other Criteria:

Staff Reviewer Name(s):

<table>
<thead>
<tr>
<th>1. IMPACT, OPPORTUNITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See guidance on evidence. Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria. (evaluation criteria)</td>
</tr>
</tbody>
</table>

1a. High Impact: H M L I (The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.)

De.4 Subject/Topic Areas (Check all the areas that apply): Infectious Diseases, Infectious Diseases: Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS)

De.5 Cross Cutting Areas (Check all the areas that apply):

1a.1 Demonstrated High Impact Aspect of Healthcare: A leading cause of morbidity/mortality, Patient/societal consequences of poor quality, Severity of illness

1a.2 If “Other,” please describe:

1a.3 Summary of Evidence of High Impact (Provide epidemiologic or resource use data):

Approximately 1.2 million people in the U.S. age 13 and older are estimated to be living with HIV and as many as 20 percent of them are undiagnosed. (CDC, 2012) Despite strong efforts that have prevented significant increases in new cases of HIV/AIDS since 2006, an average of 50,000 people are newly infected each year, (CDC, Aug 2011) and although the number of deaths due to HIV/AIDS infection declined 7 percent from 2006-2009, (CDC, Feb 2011) it is still one of the top leading causes of death for black males and females and Hispanic/Latina females in the 35–44 age group. (CDC, 2012) These steady incidence rates and declining mortality rates mean more people than ever are living with HIV/AIDS; ensuring they receive recommended, high-quality care supports prevention efforts and significantly affects their ability to lead healthier lives. Preventing HIV and its related illness and death is a significant national health policy objective and 18 of the U.S. Healthy People 2020 goals are related to HIV prevention and treatment. (USDHHS, 2012)

RNA plasma levels in HIV patients are important to monitor because they help assess the efficacy of antiretroviral therapy (ART): RNA levels less than 50 copies/mL is regarded as the optimal outcome of ART, (Murray, et al., 1999; Doyle, et al., 2012) although 200 copies/mL is often used in clinical trials and the AIDS Clinical Trials Group. (DHHS, 2012) Controlling RNA plasma levels below the limits of assay quantification can prevent HIV patients from developing a new AIDS-defining event or death. (Marschner, et al., 1998) Therefore, RNA levels should be measured in all patients at baseline and on a regular basis thereafter, especially in patients who are on treatment, to monitor response to ART and prevent disease progression. (OARAC, 2011) For most individuals who are adherent to their antiretroviral regimens and who do not harbor resistance mutations to the prescribed drugs, viral suppression is generally achieved in 12 to 24 weeks, although it may take longer in some patients. (OARAC, 2011)


See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable

Created on: 07/16/2012 at 02:46 PM
1b. Opportunity for Improvement: H□ M□ L□ I □
(There is a demonstrated performance gap - variability or overall less than optimal performance)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:
Physicians who regularly monitor plasma viral load in HIV patients can detect whether patients are responding to antiretroviral therapy. Achieving good control (i.e., levels below the limits of assay quantification) reduces the risk of developing an AIDS-defining event or death.


1b.2 Summary of Data Demonstrating Performance Gap (Variation or overall less than optimal performance across providers):
[For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]
CMS Physician Quality Reporting System:
This measure was used in the 2009 and 2010 CMS Physician Quality Reporting System (2011 data has been requested from CMS). For this measure, the average performance rate per eligible professional was 76.7% in 2009 and 75.5% in 2010. These numbers indicate there is a gap in care with significant room for improvement.

1b.3 Citations for Data on Performance Gap: [For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

1b.4 Summary of Data on Disparities by Population Group: [For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]
The measure is not stratified by patient groups or cohorts that could potentially be affected by disparities in care. NCQA has participated with IOM and others in attempting to include information on disparities in measure data collection. However, at the present time, this data is not coded in a standard manner and is incompletely captured. There are no consistent standards for what
entity (physician, group, plan, and employer) should capture and report this data. While “requiring” reporting of the data could push the field forward, it has been our position that doing so would create substantial burden without generating meaningful results. We believe that the measure specifications should not require this unless absolutely necessary since the data needed to determine disparities cannot be ascertained from the currently available sources.

1b.5 Citations for Data on Disparities Cited in 1b.4: [For Maintenance – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included] 
N/A

1c. Evidence (Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.)

Is the measure focus a health outcome? Yes [ ] No [ ] If not a health outcome, rate the body of evidence.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Quality</th>
<th>Consistency</th>
<th>Does the measure pass subcriterion1c?</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-H</td>
<td>M-H</td>
<td>M-H</td>
<td>Yes [ ]</td>
</tr>
<tr>
<td>L</td>
<td>M-H</td>
<td>M</td>
<td>Yes [ ] IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No [ ]</td>
</tr>
<tr>
<td>M-H</td>
<td>L</td>
<td>M-H</td>
<td>Yes [ ] IF potential benefits to patients clearly outweigh potential harms: otherwise No [ ]</td>
</tr>
<tr>
<td>L-M-H</td>
<td>L-M-H</td>
<td>L</td>
<td>No [ ]</td>
</tr>
</tbody>
</table>

Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service

Does the measure pass subcriterion1c? Yes [ ] IF rationale supports relationship

1c.1 Structure-Process-Outcome Relationship (Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process-health outcome; intermediate clinical outcome-health outcome):

This is an intermediate outcome measure.

HIV RNA viral load control >> Slower progression of HIV/AIDS >> Reduced morbidity/mortality

1c.2-3 Type of Evidence (Check all that apply):

Clinical Practice Guideline

1c.4 Directness of Evidence to the Specified Measure (State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population):

Department of Health and Human Services (DHHS) treatment guidelines recommend that plasma HIV RNA (viral load) be measured in all HIV/AIDS patients at baseline and on a regular basis thereafter, especially in patients who are on treatment, because viral load is the most important indicator of response to antiretroviral therapy (ART). HIV RNA measurement and control is critical, because there is a significant association between decreased plasma viremia and improved clinical outcomes. The guidelines also note that viral suppression is generally achieved in 12–24 weeks and define virologic failure as a confirmed viral load >200 copies/mL, which eliminates most cases of apparent viremia caused by blips or assay variability.

1c.5 Quantity of Studies in the Body of Evidence (Total number of studies, not articles): There were 33 studies cited in the DHHS guidelines. Two were randomized control trials of 1,435 patients, 25 were clinical trials of 6,330 patients, three were observational studies of 1,961 patients and three were cohort studies of 1,026 patients.

1c.6 Quality of Body of Evidence (Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included
in the evidence); and c) imprecision/wide confidence intervals due to few patients or events): The DHHS recommendations are supported by strong evidence including one or more randomized trials with clinical outcomes and/or validated laboratory endpoints.

1c.7 Consistency of Results across Studies (Summarize the consistency of the magnitude and direction of the effect): The evidence cited in the DHHS guidelines is consistent in showing the benefits of measuring plasma HIV RNA (viral load) in all HIV/AIDS patients at baseline and on a regular basis thereafter, especially in patients who are on treatment. The evidence cited in the guidelines is also consistent in supporting the definition of virologic failure as a confirmed viral load >200 copies/mL.

1c.8 Net Benefit (Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms): Clinical studies have demonstrated that sustaining viral suppression and maintaining higher CD4 count, mostly as a result of effective combination antiretroviral therapy, can delay or prevent some non-AIDS-defining complications, such as HIV-associated kidney disease. Sustained viral suppression and immune recovery may also delay or prevent other disorders, such as liver disease, cardiovascular disease, and malignancies.


1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? Yes

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: These guidelines were developed by the DHHS Panel on Antiretroviral Guidelines for Adults and Adolescents (a Working Group of the Office of AIDS Research Advisory Council). The Panel is composed of more than 30 voting members who have expertise in HIV care and research. The U.S. government representatives include at least 1 representative from each of the following DHHS agencies: CDC, FDA, HRSA, and NIH. These members are appointed by their respective agencies. Approximately 2/3 of the Panel members are nongovernmental scientific members. There are 4-5 community members with knowledge in HIV treatment and care. Members who do not represent U.S. government agencies are selected after an open announcement to call for nominations. Each member serves on the Panel for a 4-year term, with an option to be reappointed for an additional term. All members of the Panel submit a written financial disclosure annually reporting any association with manufacturers of antiretroviral drugs or diagnostics used for management of HIV infections.

1c.11 System Used for Grading the Body of Evidence: Other

1c.12 If other, identify and describe the grading scale with definitions: Strength of Recommendation: A: Strong recommendation for the statement; B: Moderate recommendation for the statement; C: Optional recommendation for the statement. Quality of Evidence: I: One or more randomized trials with clinical outcomes and/or validated laboratory endpoints; II: One or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; III: Expert opinion

1c.13 Grade Assigned to the Body of Evidence: A-I

1c.14 Summary of Controversy/Contradictory Evidence: There are other definitions of viral load failure other than the one cited in the DHHS guidelines. For instance, the FDA defines it as the time to loss of virological response (TLOVR) algorithm (Samaranayaka, 2010). Another article notes that “defining failure by a confirmed HIV RNA more than 50 copies/ml is the most conservative approach, but the use of such low limits of detection in clinical trials may lead to a high false-positive ‘failure’ rate, thus a definition of 200 copies/ml may be preferable” (Aldous, 2009).

According to a 2011 Guide for HIV/AIDS Clinical Care produced by the Department of Health and Human Services, once a patient has started ART, the viral load is used to monitor the response to therapy. A key goal of ART is to achieve a viral load that is below the level of detection (e.g., <40 copies/mL). Because CD4 and clinical responses may lag behind changes in viral load, viral load testing is essential for detecting virologic failure in a timely manner. With an effective ARV regimen, a 10-fold decline (1 logarithm)
is expected within the first month, and suppression to undetectable levels should be achieved within 3-6 months after initiation of therapy. Isolated low-level elevations (typically <400 copies/mL) in viral load may occur in patients on ART; these "blips" generally do not predict subsequent virologic failure. Additionally, some viral load assays appear to produce low-level positive results (<200 copies/mL) more commonly than others; as with blips, these do not appear to increase the risk of virologic failure. To avoid confusing virologic failure with blips or test variability, current guidelines define virologic failure as repeated HIV RNA levels >200 copies/mL. If the viral load does not reduce to an undetectable level (or at least <200 copies/mL), or if it rebounds after suppression, virologic failure has occurred, and possible causes should be investigated (e.g., poor ARV adherence, resistance to ARVs, or reduced drug exposure). (DHHS, 2011)

1c.15 Citations for Evidence other than Guidelines (Guidelines addressed below):


1c.16 Quote verbatim, the specific guideline recommendation (Including guideline # and/or page #):
[Strength of recommendation and quality of evidence are in parentheses, following each recommendation]

DHHS Panel on Antiretroviral Guidelines for Adults and Adolescents (2012): Plasma HIV RNA (viral load) should be measured in all patients at baseline and on a regular basis thereafter, especially in patients who are on treatment, because viral load is the most important indicator of response to antiretroviral therapy (ART) (A-I). For the purposes of clinical trials the AIDS Clinical Trials Group (ACTG) currently defines virologic failure as a confirmed viral load >200 copies/mL, which eliminates most cases of apparent viremia caused by blips or assay variability. For most individuals who are adherent to their antiretroviral (ARV) regimens and who do not harbor resistance mutations to the prescribed drugs, viral suppression is generally achieved in 12–24 weeks, even though it may take longer in some patients. In addition to viral load monitoring, a number of additional factors, such as adherence to prescribed medications, altered pharmacology, or drug interactions, should be assessed. Patients who fail to achieve viral suppression should undergo resistance testing to aid in the selection of an alternative regimen, as discussed in Drug Resistance Testing and Virologic and Immunologic Failure (A-I).


1c.18 National Guideline Clearinghouse or other URL: http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf;

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? Yes

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: DHHS Adult/Adolescent Guidelines; expert consensus with evidence review

1c.21 System Used for Grading the Strength of Guideline Recommendation: Other

1c.22 If other, identify and describe the grading scale with definitions: Strength of Recommendation: A: Strong recommendation for the statement; B: Moderate recommendation for the statement; C: Optional recommendation for the statement. Quality of Evidence: I: One or more randomized trials with clinical outcomes and/or validated laboratory endpoints; II: One or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; III: Expert opinion

1c.23 Grade Assigned to the Recommendation: A-I
1c.24 Rationale for Using this Guideline Over Others: It is NCQA policy to use guidelines that are evidence-based, applicable to physicians and other healthcare providers, and developed by a national specialty organization or government agency.

NCQA and PCPI convened an expert panel of diverse stakeholders to review the guidelines and evidence for this measure. The panel determined the measure was scientifically sound using the full body of evidence and guidelines for this measure concept.

Based on the NQF descriptions for rating the evidence, what was the developer’s assessment of the quantity, quality, and consistency of the body of evidence?
1c.25 Quantity: High 1c.26 Quality: High 1c.27 Consistency: High
1c.28 Attach evidence submission form:
1c.29 Attach appendix for supplemental materials:

Was the threshold criterion, Importance to Measure and Report, met? (1a & 1b must be rated moderate or high and 1c yes) Yes ☐ No ☐
Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.
For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See guidance on measure testing.

S.1 Measure Web Page (In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained). Do you have a web page where current detailed specifications for this measure can be obtained? Yes ☐

S.2 If yes, provide web page URL: The NQF endorsed measure is available on AMA’s website: http://www.ama-assn.org/apps/listserv/x-check/qmeasure.cgi?submit=PCPI

2a. RELIABILITY. Precise Specifications and Reliability Testing: H ☐ M ☐ L ☐ I ☐

2a1. Precise Measure Specifications. (The measure specifications precise and unambiguous.)

2a1.1 Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome):
Patients with an HIV viral load <200 copies/mL

2a1.2 Numerator Time Window (The time period in which the target process, condition, event, or outcome is eligible for inclusion):
12-month measurement period

2a1.3 Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses:
Patients with an HIV viral load <200 copies/mL

New CPT® Category II Codes will be requested

2a1.4 Denominator Statement (Brief, narrative description of the target population being measured):
All patients aged 13 years or older with a diagnosis of HIV/AIDS, with at least two visits in the measurement year, with at least 90 days between each visit, who received potent antiretroviral therapy* for at least 6 months

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
Created on: 07/16/2012 at 02:46 PM
**Definition of "Medical Visit" - any visit with a health care professional who provides routine primary care for the patient with HIV/AIDS (may be but is not limited to a primary care clinician, ob/gyn, pediatrician, infectious diseases specialist)**

*Potent antiretroviral therapy is described as any antiretroviral therapy that has demonstrated optimal efficacy and results in durable suppression of HIV as shown by prior clinical trials*

<table>
<thead>
<tr>
<th>2a1.5 <strong>Target Population Category</strong> (Check all the populations for which the measure is specified and tested if any):</th>
<th>Adult/Elderly Care, Children's Health, Populations at Risk</th>
</tr>
</thead>
</table>

| 2a1.6 **Denominator Time Window** (The time period in which cases are eligible for inclusion): | 12-month measurement period |

| 2a1.7 **Denominator Details** (All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses): | All patients aged 13 years and older with a diagnosis of HIV/AIDS, who had at least two medical visits during the measurement year, with at least 90 days between each visit, who received potent antiretroviral therapy* for at least 6 months |

| ICD-9 diagnosis code: 042, V08, and |
| CPT® E/M Service code: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99384, 99385, 99386, 99387, 99394, 99395, 99396, 99397, 99241, 99242, 99243, 99244, 99245, and |
| CPT® Category II Code: 4270F-Patient receiving potent antiretroviral therapy for 6 months or longer |

| Note: The denominators for the NCQA/AMA-PCPI HIV/AIDS measures have been harmonized, where appropriate. |

| 2a1.8 **Denominator Exclusions** (Brief narrative description of exclusions from the target population): | None |

| 2a1.9 **Denominator Exclusion Details** (All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses): | N/A |

| 2a1.10 **Stratification Details/Variables** (All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses): | N/A |

| 2a1.11 **Risk Adjustment Type** (Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13): | No risk adjustment or risk stratification |

| 2a1.12 If "Other," please describe: |

| 2a1.13 **Statistical Risk Model and Variables** (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.): | N/A |

| 2a1.14-16 **Detailed Risk Model Available at Web page URL** (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed: |
2a1.17-18. Type of Score: Rate/proportion

2a1.19 Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score): Better quality = Higher score

2a1.20 Calculation Algorithm/Measure Logic (Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.): Measure Calculation
For performance purposes, this measure is calculated by creating a fraction with the following components: Denominator and Numerator.

Step 1: Determine the eligible population. The eligible population is all patients aged 13 years and older with a diagnosis of HIV/AIDS.

Step 2: Determine number of patients meeting the denominator criteria as specified in Section 2a1.7 above.

Step 3: Determine the number of patients who meet the numerator criteria as specified in section 2a1.3 above. The numerator includes all patients who have a viral load <200 copies/mL after six months of potent antiretroviral therapy.

Step 4: Calculate the rate by dividing the total from Step 3 by the total from Step 2.

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment: Attachment
PCPI_Sample_Calculation_Algorithm-634768430028085124.pdf

2a1.24 Sampling (Survey) Methodology. If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate): N/A

2a1.25 Data Source (Check all the sources for which the measure is specified and tested). If other, please describe: Administrative claims, Electronic Clinical Data, Electronic Clinical Data: Laboratory, Electronic Clinical Data: Pharmacy

2a1.26 Data Source/Data Collection Instrument (Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.): N/A

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:

2a1.33 Level of Analysis (Check the levels of analysis for which the measure is specified and tested): Clinician: Group/Practice, Clinician: Individual, Population: County or City

2a1.34-35 Care Setting (Check all the settings for which the measure is specified and tested): Ambulatory Care: Clinician Office/Clinic
2a2. Reliability Testing. (Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability.)

2a2.1 Data/Sample (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

Measure Validity
The measure performance was calculated from data collected using two different methods of collection:
- Automated electronic health record report
- Visual inspection of the medical record by professional data abstractors to capture the data elements to manually construct the performance

The data source was electronic health records in the ambulatory care setting. The data sample came from four sites representing community health centers serving primarily low-income and uninsured patients with multiple, complex needs in the Midwest region. The sample consisted of 410 patient encounters. Visual inspection of the medical records was performed in 2009.

2a2.2 Analytic Method (Describe method of reliability testing & rationale):
As referenced in the NQF Guidance on Measure Testing (2011), separate reliability testing of the data elements is not required if empirical validity testing of the data elements is conducted (e.g., if the validity of ICD-9 codes in administrative claims data as compared to clinical diagnoses in the medical record is demonstrated, then inter-coder or inter-abstractor reliability would not be required). Consequently, we are submitting validity testing results to demonstrate reliability for this measure.

Measure Validity
Data from a performance report for the measure automatically-generated from the electronic health record (designed to collect the necessary data elements to identify eligible cases and calculate the performance score) were compared to data elements found and scores calculated manually on visual inspection of the medical record by trained abstractors.

Data analysis included percent agreement at the denominator and numerator.

2a2.3 Testing Results (Reliability statistics, assessment of adequacy in the context of norms for the test conducted):

Measure Validity
Below are the results when comparing electronic health record automated report to visual inspection of the medical record.
Automated calculation of performance=96.6%
Manual calculation of performance=100%
Percentage Point Difference between Automated and Manual=3%

2b. VALIDITY. Validity, Testing, including all Threats to Validity:  

2b1.1 Describe how the measure specifications (measure focus, target population, and exclusions) are consistent with the evidence cited in support of the measure focus (criterion 1c) and identify any differences from the evidence:
The evidence is consistent with the focus and scope of this measure.

2b2. Validity Testing. (Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)

2b2.1 Data/Sample (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

Measure Validity
The measure performance was calculated from data collected using two different methods of collection:
- Automated electronic health record report
- Visual inspection of the medical record by professional data abstractors to capture the data elements to manually construct the performance

The data source was electronic health records in the ambulatory care setting. The data sample came from four sites representing community health centers serving primarily low-income and uninsured patients with multiple, complex needs in the Midwest region. The sample consisted of 410 patient encounters. Visual inspection of the medical records was performed in 2009.
Face Validity
An expert panel was used to assess the face validity of this measure when it was re-evaluated in 2012 (it was assessed with all three screenings—chlamydia, gonorrhea, and syphilis—in the numerator. The full list of panel members is provided under the section Additional Information, Ad.1. Workgroup/Expert Panel Involved in Measure Development – 2012 (Measure Review) Panel.

2b2.2 Analytic Method (Describe method of validity testing and rationale; if face validity, describe systematic assessment):
Measure Validity
Data from a performance report for the measure automatically-generated from the electronic health record (designed to collect the necessary data elements to identify eligible cases and calculate the performance score) were compared to data elements found and scores calculated manually on visual inspection of the medical record by trained abstractors.

Data analysis included percent agreement at the denominator and numerator.

Face Validity
Face validity of the measure score as an indicator of quality was systematically assessed as follows. After the measure was fully specified, the expert panel was asked to rate their agreement with the following statement:
The scores obtained from the measure as specified will provide an accurate reflection of quality and can be used to distinguish good and poor quality. Scale 1-5, where 1=Strongly Disagree; 3=Neither Agree or Disagree; 5=Strongly Agree.

2b2.3 Testing Results (Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment):
Measure Validity
Below are the results when comparing electronic health record automated report to visual inspection of the medical record.
Automated calculation of performance=96.6%
Manual calculation of performance=100%
Percentage Point Difference between Automated and Manual=3%

Face Validity
The results of the expert panel rating of the validity statement were as follows: N=6; Mean rating=4.83 and 100% of respondents either agree or strongly agree that this measure can accurately distinguish good and poor quality.

The results of the expert panel rating of the validity statement were as follows:
Frequency/Distribution of Ratings
1 (Strongly Disagree)-0 members
2-0 members
3 (Neither Agree or Disagree)-0 members
4-1 member
5 (Strongly Agree)-5 members

POTENTIAL THREATS TO VALIDITY. (All potential threats to validity were appropriately tested with adequate results.)

2b3. Measure Exclusions. (Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.)

2b3.1 Data/Sample for analysis of exclusions (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):
N/A

2b3.2 Analytic Method (Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference):
N/A
2b3.3 Results (Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses): N/A

2b4. Risk Adjustment Strategy. (For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.)

2b4.1 Data/Sample (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included): N/A

2b4.2 Analytic Method (Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables): N/A

2b4.3 Testing Results (Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata): N/A

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: N/A

2b5. Identification of Meaningful Differences in Performance. (The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.)

2b5.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

CMS Physician Quality Reporting System:
The following information is from the 2009 and 2010 CMS Physician Quality Reporting System (2011 data has been requested from CMS). In 2009, 69 eligible providers reported this measure, and in 2010, 68 eligible providers reported this measure. This represented 579 total instances in 2009, and 696 total instances in 2010.

2b5.2 Analytic Method (Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance):

CMS Physician Quality Reporting System:
For the CMS PQRI Program, the mean performance rate was calculated from 579 total instances in 2009, and 696 total instances in 2010.

2b5.3 Results (Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):

CMS Physician Quality Reporting System:
This measure was used in the 2009 and 2010 CMS Physician Quality Reporting System. For this measure, the average performance rate per eligible professional was 76.7% in 2009 and 75.5% in 2010. These numbers indicate there is continued gap in care and room for improvement.

2b6. Comparability of Multiple Data Sources/Methods. (If specified for more than one data source, the various approaches result in comparable scores.)

2b6.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

This measure has not been compared across data sources.

2b6.2 Analytic Method (Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure):

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
Created on: 07/16/2012 at 02:46 PM 12
2b6.3 Testing Results (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted): N/A

2c. Disparities in Care: H M L I NA (If applicable, the measure specifications allow identification of disparities.)

2c.1 If measure is stratified for disparities, provide stratified results (Scores by stratified categories/cohorts): The measure is not stratified by patient groups or cohorts that could potentially be affected by disparities in care. NCQA has participated with IOM and others in attempting to include information on disparities in measure data collection. However, at the present time, this data is not coded in a standard manner and is incompletely captured. There are no consistent standards for what entity (physician, group, plan, and employer) should capture and report this data. While "requiring" reporting of the data could push the field forward, it has been our position that doing so would create substantial burden without generating meaningful results. We believe that the measure specifications should not require this unless absolutely necessary since the data needed to determine disparities cannot be ascertained from the currently available sources.

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain: N/A

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, Scientific Acceptability of Measure Properties, met? (Reliability and Validity must be rated moderate or high) Yes No Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

C.1 Intended Actual/Planned Use (Check all the planned uses for which the measure is intended): Public Reporting, Quality Improvement (Internal to the specific organization)

3.1 Current Use (Check all that apply; for any that are checked, provide the specific program information in the following questions): Public Reporting, Quality Improvement (Internal to the specific organization)

3a. Usefulness for Public Reporting: H M L I (The measure is meaningful, understandable and useful for public reporting.)

3a.1. Use in Public Reporting - disclosure of performance results to the public at large (If used in a public reporting program, provide name of program(s), locations, Web page URL(s)). If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: [For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.]

This measure was used in the CMS PQRS program in 2009, 2010, and 2011, and will be used in 2012. http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/index.html?redirect=/pQRS
### 3a.2 Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting.

If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: The successful use in PQRS supports the feasibility and usability of the measure specification on a national scale and the flat performance rates in 2009 and 2010 demonstrate the need for continued public reporting of this important measure of intermediate outcomes for HIV patients. Also, similar viral load suppression measure is used by HIVQUAL-US, indicating that a measure with this focus is meaningful and useful for public reporting programs.

### 3.2 Use for other Accountability Functions (payment, certification, accreditation).

If used in a public accountability program, provide name of program(s), locations, Web page URL(s): This measure may be used in a Maintenance of Certification program.

### 3b. Usefulness for Quality Improvement: **H** □ **M** □ **L** □ **I** □

(The measure is meaningful, understandable and useful for public reporting.)

### 3b.1 Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s):

**[For Maintenance – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement]**.

The Health Resources and Services Administration’s (HRSA) HIV/AIDS Bureau (HAB) uses a similar measure in its Core Clinical Performance Measure Module (PMM). This module is a reporting tool that allows providers to compare their performance regionally and nationally to other providers, and supports quality improvement. Also, the measure specifications are made freely available on the PCPI website and through the implementation efforts of medical specialty societies.

### 3b.2 Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement.

If usefulness was demonstrated (e.g., QI initiative), describe the data, method and results:

The successful use in PQRS supports the feasibility and usability of the measure specification on a national scale and the results show substantial improvement is needed as mean provider scores fell from 2009 to 2010, indicating the need for continued QI initiatives in this area. Also, a RNA suppression measure is used by HAB’s PMM, indicating that a measure with this focus is meaningful for quality improvement for this patient population.

### Overall, to what extent was the criterion, **Usability**, met? **H** □ **M** □ **L** □ **I** □

Provide rationale based on specific subcriteria:

### 4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)

#### 4a. Data Generated as a Byproduct of Care Processes: **H** □ **M** □ **L** □ **I** □

**4a.1-2 How are the data elements needed to compute measure scores generated? (Check all that apply).**

Data used in the measure are:
- generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims),
- Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

#### 4b. Electronic Sources: **H** □ **M** □ **L** □ **I** □

**4b.1 Are the data elements needed for the measure as specified available electronically (Elements that are needed to compute measure scores are in defined, computer-readable fields):** ALL data elements are in a combination of electronic sources

**4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:**

#### 4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: **H** □ **M** □ **L** □ **I** □

**4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during**
testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:
We are not aware of any unintended consequences related to this measurement.

4d. Data Collection Strategy/Implementation: H\ M\ L\ I

A.2 Please check if either of the following apply (regarding proprietary measures): Proprietary measure

4d.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues (e.g., fees for use of proprietary measures):
As a result of our current review of the measures and our experience with the measures since 2008, we have learned and subsequently changed the NCQA/AMA-PCPI HIV/AIDS measures in the following ways.
• We have attempted to limit the number of exclusions/exceptions in these measures due to difficulties accurately capturing them in the health record.
• We have combined measures that address similar clinical areas (e.g., STD screening) into one measure to support feasibility and implementation.

Overall, to what extent was the criterion, Feasibility, met? H\ M\ L\ I
Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes\ No
Rationale:

If the Committee votes No, STOP.
If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND COMPETING MEASURES

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure before a final recommendation is made.

5.1 If there are related measures (either same measure focus or target population) or competing measures (both the same measure focus and same target population), list the NQF # and title of all related and/or competing measures:

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?

5a.2 If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden:

5b. Competing Measure(s)

5b.1 If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible):
NQF #0407 HIV/AIDS: HIV RNA Control After Six Months of Potent Antiretroviral Therapy, Last Updated Date: Jul 13, 2012


Co.2 Point of Contact: Bob, Rehm, Assistant Vice President, Performance Measurement, Rehm@ncqa.org, 202-955-1728-

Co.3 Measure Developer if different from Measure Steward: National Committee for Quality Assurance, 1100 13th Street NW, Washington, District Of Columbia, 20005

Co.4 Point of Contact: Dawn, Alayon, MPH, CPH, alayon@ncqa.org, 202-955-3533-

Co.5 Submitter: Dawn, Alayon, MPH, CPH, Senior Health Care Analyst, alayon@ncqa.org, 202-955-3533-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development:
Physician Performance Measures (Measures) and related data specifications have been developed by the American Medical Association (AMA) in collaboration with the Physician Consortium for Performance Improvement™ (the Consortium) and the National Committee for Quality Assurance (NCQA). The Health Resources and Services Administration (HRSA) and the Infectious Diseases Society of America also participated in the development of this measure.

Co.7 Public Contact: Bob, Rehm, Assistant Vice President, Performance Measurement, Rehm@ncqa.org, 202-955-1728-, National Committee for Quality Assurance

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members’ names and organizations. Describe the members’ role in measure development.
2007-2008 (Measure Development) Panel
The measure development panel helped guide development of this measure. Staff sought member feedback on all components of the measure (including denominator, numerator, exclusions). The panel met multiple times to achieve consensus on the measures and to address questions about the measure.

Workgroup members
Judith Aberg- Bellevue Hospital Center- New York University (co-chair)
Michael Horberg- Santa Clara Medical Center (co-chair)
Bruce Agins- New York State Department of Health AIDS Institute (NYSDOH)
Steven Asch- RAND Health Communications
Larry Bryant-Housingworks- Advocacy & Organizing
Sophia Chang- California Healthcare Foundation
Laura Cheever- Health Resources and Services Administration (HRSA)
Antoine Douaihy- UPMC Mercy
Arny Deudonne- Center for Children- University Hospital
Patricia Emmanuel- University of South Florida
Marcy Fenton- LA County Department of Public Health
Joel Gallant- Johns Hopkins University School of Medicine
Joseph Gathe- Texas Medical Center
Cyril Goshima- Hawaii AIDS Education and Training Center
Andrew Hamilton- Alliance of Chicago
Lisa Hischhorn- Harvard Medical School, JSI Research and Training Institute
Jan King- Los Angeles County Department of Health Services
W. Christopher Matthews- UC San Diego, Department of Medicine
James L. Raper- University of Alabama at Birmingham
Jennifer Read- National Institutes of Health (NIH)
Kimberly Smith - Rush University Medical Center  
Alice Stek - University of Southern California  
Valerie Stone - Harvard Medical School, Massachusetts General Hospital  
Bob Tracy - Bob Tracy Consulting  
Paul Voldberding - VAMC  
Rochelle Walensky - Massachusetts General Hospital  
Bruce Williams - University of New Mexico Health Sciences Center

Liaisons  
Brigid Krezek - American College of Obstetricians and Gynecologists  
Dan Green - Centers for Medicare & Medicaid Services (CMS)  
Deborah Willis-Fillinger - Health Resources and Services Administration (HRSA)  
Magda Barini-Garcia - Health Resources and Services Administration (HRSA)  
Lori DeLorenzo - Health Resources and Services Administration (HRSA)  
Christine Lubinski - Infectious Diseases Society of America/ HIV Medicine Association  
Jennifer Padberg - Infectious Diseases Society of America/ HIV Medicine Association

2012 (Measure Review) Panel  
The measure review panel reviewed the existing measure against current clinical practice guidelines to ensure it reflected current evidence.

Workgroup members  
Judith Aberg - New York University School of Medicine  
Bruce Agins - New York State Department of Health AIDS Institute (NYSDOH)  
Allison Agwu - Johns Hopkins Medical Institutions  
Marc Foca - Columbia University  
Rohan Hazra - National Institutes of Health (NIH)  
Lisa Hirschhorn - Harvard Medical School, JSI Research and Training Institute  
Gregory Lucas - Johns Hopkins University  
Michael Horberg - Mid-Atlantic Permanente Group, PC  
Vicki Peters - NYC Department of Health and Mental Hygiene  
Alice Stek - University of Southern California School of Medicine  
Bruce Williams - University of New Mexico Health Sciences Center

Liaisons  
Laura Cheever - Health Resources and Services Administration (HRSA)  
Anna Huang - Health Resources and Services Administration (HRSA)  
Marlene Matosky - Health Resources and Services Administration (HRSA)  
John Brooks - Centers for Disease Control and Prevention (CDC)  
Abigail Viall - Centers for Disease Control and Prevention (CDC)  
Pascale Wortley - Centers for Disease Control and Prevention (CDC)

Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward: N/A

Measure Developer/Steward Updates and Ongoing Maintenance  
Ad.3 Year the measure was first released: 2008  
Ad.4 Month and Year of most recent revision: 06, 2012  
Ad.5 What is your frequency for review/update of this measure? Every three years, or sooner if clinical guidelines are updated.  
Ad.6 When is the next scheduled review/update for this measure?

Ad.7 Copyright statement: This Measure, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes, e.g., use by health care providers in connection with their practices. Commercial use is defined as the

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable  
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sale, license, or distribution of the Measures for commercial gain, or incorporation of the Measures into a product or service that is sold, licensed or distributed for commercial gain. Commercial uses of the Measures require a license agreement between the user and American Medical Association, (on behalf of the Consortium) or NCQA. Neither the AMA, NCQA, Consortium nor its members shall be responsible for any use of the Measure.

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**Ad.8 Disclaimers:** 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.

THE MEASURES AND SPECIFICATIONS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND.

**Ad.9 Additional Information/Comments:** While there are no currently NQF-endorsed measures that are related to this measure, we have met with HRSA and understand that they will be submitting a measure that has a slightly different denominator and numerator. The HRSA measure will calculate a rate for all patients with HIV/AIDS who have a viral load <200 copies/mL. The NQCA measure, which supports a viral load <200 copies/mL for patients with HIV/AIDS who have been taking potent antiretroviral therapy for six months, is firmly supported by the evidence. The purpose of potent antiretroviral therapy is to bring a patient's viral load below the limits of detection. Measuring how many patients have their viral load under control therefore allows a provider to understand how many patients are on effective ART regimens. The HRSA measure may also be of interest to HIV clinics, if the providers would like to assess what percentage of their entire HIV/AIDS population is under control.

**Date of Submission (MM/DD/YY): 07/02/2012**
Sample PCPI Calculation Algorithm

Calculation for Performance
For performance purposes, a measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.

Numerator (A) Includes:
Number of patients meeting numerator criteria

Denominator (PD) Includes:
Number of patients meeting criteria for denominator inclusion

Denominator Exclusions (C) Include:
Number of patients with valid medical, patient or system exclusions (where applicable; will differ by measure)

Performance Calculation

\[
\frac{A}{PD} \quad \text{(A (# of patients meeting numerator criteria)} \\
\quad \text{PD (# patients in denominator) - C (# patients with valid denominator exclusions)}
\]

If a measure does not allow for exclusion(s), it is calculated by creating a fraction with the following components: Numerator and Denominator.

Numerator (A) Includes:
Number of patients meeting numerator criteria

Denominator (PD) Includes:
Number of patients meeting criteria for denominator inclusion

\[
\frac{A}{PD} \quad \text{(A (# of patients meeting measure criteria)} \\
\quad \text{PD (# of patients in denominator)}
\]

It is also possible to calculate the percentage of patients excluded overall, or excluded by medical, patient, or system reason where applicable:

Overall Exclusion Calculation

\[
\frac{C}{PD} \quad \text{(C (# of patients with any valid exclusion)} \\
\quad \text{PD (# patients in denominator)}
\]

OR

Exclusion Calculation by Type

\[
\frac{C_1}{PD} \quad \text{(C_1 (# patients with medical reason)} \\
\quad \text{PD (# patients in denominator)} \quad \frac{C_2}{PD} \quad \text{(C_2 (# patients with patient reason)} \\
\quad \text{PD (# patients in denominator)} \quad \frac{C_3}{PD} \quad \text{(C_3 (# patients with system reason)} \\
\quad \text{PD (# patients in denominator)}
\]