NQF #0033 Chlamydia screening in women

NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

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.

NQF #: 0033 NQF Project: Population Health: Prevention Project
(for Endorsement Maintenance Review)
Original Endorsement Date: Aug 10, 2009 Most Recent Endorsement Date: Aug 10, 2009

BRIEF MEASURE INFORMATION

De.1 Measure Title: Chlamydia screening in women
Co.1.1 Measure Steward: National Committee for Quality Assurance
De.2 Brief Description of Measure: Assesses the percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.
2a1.1 Numerator Statement: At least one chlamydia test during the measurement year as documented through administrative data.
2a1.4 Denominator Statement: Women 16–24 years.
2a1.8 Denominator Exclusions: Members who had a pregnancy test during the measurement year, followed within seven days (inclusive) by either a prescription for isotretinoin (Accutane) or an x-ray. This exclusion does not apply to members who qualify for the denominator based on services other than the pregnancy test alone. Refer to Table CHL-D and Table CHL-E to identify exclusions.
1.1 Measure Type: Process
2a1.25-26 Data Source: Administrative claims, Electronic Clinical Data: Electronic Health Record, Electronic Clinical Data: Pharmacy
2a1.33 Level of Analysis: Clinician: Group/Practice, Clinician: Individual, Health Plan
1.2-1.4 Is this measure paired with another measure? No
De.3 If included in a composite, please identify the composite measure (title and NQF number if endorsed):

STAFF NOTES (issues or questions regarding any criteria)

Comments on Conditions for Consideration:

Is the measure untested? Yes☐ No☐ If untested, explain how it meets criteria for consideration for time-limited endorsement:
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):

1. IMPACT, OPPORTUNITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT

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)

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 : Sexually Transmitted, Prevention
De.5 Cross Cutting Areas (Check all the areas that apply): Access, Population Health

1a.1 Demonstrated High Impact Aspect of Healthcare: Affects large numbers, High resource use, Patient/societal consequences of poor quality

1a.2 If “Other,” please describe:

1a.3 Summary of Evidence of High Impact (Provide epidemiologic or resource use data):
Chlamydia trachomatis is the most common sexually transmitted bacterial infection in the US. It is often known as a “silent” disease because most infected people have no symptoms and therefore are unaware they have an infection.1 Although Chlamydia symptoms are usually mild or nonexistent, untreated infections can lead to serious and irreversible complications.1,3 Among women with chlamydial infection, 20-40 percent will experience pelvic inflammatory disease, 50-75 percent will experience tubal factor infertility if untreated, and 65 percent will experience an ectopic pregnancy if untreated. It is the leading cause of preventable infertility and, among other adverse pregnancy related problems, can cause preterm birth, miscarriages, infant mortality, and neonatal chlamydial infections.

Over 900,000 chlamydial infections were reported to the Centers for Disease Control and Prevention (CDC) from 50 states and the District of Columbia in 2004. Since many cases are not reported or even diagnosed, it is estimated that there are actually 2.8 million new cases of chlamydia each year. From 1987 through 2004, the reported rate of chlamydial infection in women increased from 78.5 cases to 485.0 cases per 100,000 people. A portion of the increase in prevalence is attributed to continued expansion of chlamydia screening programs.

Healthy People 2010 goal is to reduce the proportion of adolescents and young adults with Chlamydia trachomatis infections to 3.0 percent. In general females have higher rates of chlamydia though they also utilize screening services more often which may cause misleading statistics. In 2003, the highest age-specific rates of reported Chlamydia in women were among 15-19 year olds and 20 to 24 year olds. For females ages 10-14 the age-specific rate was 132 per 100,000. Approximately 5 percent-14 percent of 16-20 year olds and 3 percent-12 percent of 20-24 year old women who routinely screened are infected with Chlamydia.


1b. Opportunity for Improvement: \( H \square M \square L \square I \square \\
(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:
Since up to 70 percent of chlamydial infections in women are asymptomatic, routine screening for sexually active women under 24 or 25 years old is essential. Unfortunately however, the screening rates for young women in the US are very low. If recommended annual Chlamydia screening guidelines were followed, as many as 60,000 cases of PID, 8,000 cases of chronic pelvic pain, and 7,500 cases of infertility could be prevented each year.
The USPSTF found that the evidence was inconclusive for weighing the benefits and harms for screening males.

1b.2 Summary of Data Demonstrating Performance Gap (Variation or overall less than optimal performance across providers):
[For Maintenance – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.]

Chlamydia

Commercial
Rate - Total
Data Element; 2009; 2008; 2007
N; 239; 251; 255
MEAN; 43.1; 41.7; 38.1
STDEV; 9.94; 10.1; 10.7
STDERR; 0.64; 0.64; 0.67
MIN; 20.5; 16.1; 15.9
MAX; 77.4; 81.8; 92.1
P10; 31.6; 29.3; 25.8
P25; 36.3; 34.8; 31.1
P50; 42.4; 41; 37
P75; 49.3; 48.1; 44.3
P90; 56; 53.9; 51.2

Medicaid
Rate - Total
Data Element; 2009; 2008; 2007
N; 139; 120; 130
MEAN; 56.7; 54.9; 50.7
STDEV; 10.2; 10.3; 13.0
STDERR; 0.86; 0.94; 1.14
MIN; 23.4; 15.4; 11.8
MAX; 81.4; 78.7; 76.6
P10; 44.2; 43.4; 32.6
P25; 50.6; 48.7; 43.3
P50; 55.7; 54.8; 51.8
P75; 63.7; 61.6; 59.7
P90; 69.5; 68.6; 67.0

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]
The data are performance rates from all health plans participating in the HEDIS measure set. There were 1279 plan submissions for this measure. NCQA collects data directly from Health Plan Organizations and Preferred Provider Organizations via a data submission portal - the Interactive Data Submission System (IDSS). NCQA assigns a sub-ID by an accreditable identity based on the legal entity and management structure that supports the product lines/products that NCQA accredits. Each accreditation is legally accountable entity provides to members and representation of an organization and delivery structure that is meaningful to members.
Screening females aged less than 25 years of age is ranked by the National Commission on Prevention Priorities as one of the 10 most beneficial and cost-effective prevention services, but it also is among the most underutilized. Substantial racial/ethnic disparities in chlamydial infection exist, with prevalence among non-Hispanic blacks approximately five times the prevalence among non-Hispanic whites. Among sexually active females aged 14-19 years, chlamydia prevalence is 6.8% overall (4.4% among non-Hispanic whites and 16.2% among non-Hispanic blacks).

Screening coverage increased during 2001-2009 but still was less than 60%; in 2009, coverage was 43% among eligible females enrolled in commercial health-care plans and 57% among the Medicaid population.

In regards to the chlamydia test, women aged <18 or >19 were less likely to be tested than women aged 18 to 19, with young women aged 14 to 15 having the lowest odds of being tested (Odd Ratio [OR]: 0.52). Providers were more likely to test minority (ORblack: 2.87; ORLatina: 2.10) compared with white women. Women were also more likely to be tested if they had public insurance (OR: 2.41) or were self-pay (OR: 2.35) compared with if they had private insurance. Women aged 14 to 15 and 16 to 17 with prior history of STI had increased odds of chlamydia testing (OR: 1.79 and 1.43, respectively) compared with women aged 18 to 19, changing the overall direction of association compared with women with no history of STI. The odds of testing were dramatically reduced for minority and non-privately insured young women with history of STI, although significant differences persisted.

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]

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>
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<tbody>
<tr>
<td>M-H</td>
<td>M-H</td>
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<td>Yes □</td>
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<tr>
<td>M</td>
<td>M-H</td>
<td>M</td>
<td>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>
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<tr>
<td>L-M-H</td>
<td>L-M-H</td>
<td>L</td>
<td>No □</td>
</tr>
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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):
There is good evidence that screening for Chlamydia infection in women who are at increased risk can reduce the incidence of pelvic inflammatory disease (PID), infertility and perinatal infections. The US Preventive Services Task Force (USPSTF) concluded that the benefits of screening women at increased risk are substantial.

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):
Nonpregnant women: To date there has been one good randomized controlled trial that indicates screening reduces pelvic
inflammatory disease in non-pregnant women.

Pregnant women: The previous Task Force recommendations for screening pregnant women were based on two studies that demonstrated improved pregnancy outcomes following treatment of chlamydial infection. In a time-series design study, untreated patients had a significantly higher incidence of premature rupture of membranes and low birth weight as well as a lower infant survival rate compared to treated patients and patients with negative cultures. In a case-control study, the frequencies of premature rupture of membranes, premature contractions, and small-for-gestational-age infants were significantly lower among successfully treated patients compared to chlamydia-positive patients who were unresponsive to treatment, but they were not significantly different when compared to chlamydia-negative control patients. No other studies were identified.

Men: No studies were found that described the effectiveness of screening or early treatment for men in reducing transmission to women or of preventing acute infections or complications in men. Many investigators advocate screening men as the next essential step to reduce infections, complications, and recurrences in women, as well as to improve the health of men themselves. However, these health outcomes have not yet been studied.


1c.5 Quantity of Studies in the Body of Evidence (Total number of studies, not articles): The measure is based on a USPSTF guideline that is based on a comprehensive meta-analysis (see USPSTF report for full number of studies).

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): High.

Non-pregnant women at increased risk. There is good evidence that screening for Chlamydia in women who are at increased risk can reduce the incidence of pelvic inflammatory disease (PID). The US Preventive Services Task Force (USPSTF) concluded that the benefits of screening women at increased risk are substantial.

Pregnant women at increased risk. There are no studies evaluating the effectiveness of screening for chlamydia in pregnant women who are at increased risk. The USPSTF, however, found the following: 1) screening identifies infection in asymptomatic pregnant women; 2) there is a relatively high prevalence of infection among pregnant women who are at increased risk; and 3) there is fair evidence of improved pregnancy and birth outcomes for women who are treated for chlamydia infection. The USPSTF concluded that the benefits of screening pregnant women who are at increased risk are substantial.

Women not at increased risk. The USPSTF identified no studies documenting the benefits of screening women, including pregnant women, who are not at increased risk for chlamydia infection. While recognizing the potential benefit to women identified through screening, the USPSTF concluded the overall benefit of screening would be small, given the low prevalence of infection among women not at increased risk.

Men. While concluding that the direct benefit to men of screening was likely to be small, the USPSTF noted that screening for chlamydia in men may be beneficial if it were to lead to a decreased incidence of chlamydia infection in women. The USPSTF did not, however, find evidence to support this outcome, and therefore concluded that the benefits of screening men are unknown. The USPSTF identified this as a critical gap in the evidence.

1c.7 Consistency of Results across Studies (Summarize the consistency of the magnitude and direction of the effect): Consistent

1c.8 Net Benefit (Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms): The USPSTF determined there was a positive net benefit.
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:  **USPSTF**

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

1c.12 If other, identify and describe the grading scale with definitions:

1c.13 **Grade Assigned to the Body of Evidence:**

1c.14 **Summary of Controversy/Contradictory Evidence:** While some research suggests it would be prudent to screen males for chlamydia, at present, the U.S. Preventive Services Task Force does not recommend screening males.

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

1c.16 **Quote verbatim, the specific guideline recommendation (Including guideline # and/or page #):**
The US Preventive Services Task Force (USPSTF) recommends screening for chlamydial infection for all sexually active non-pregnant young women aged 24 and younger, and for older non-pregnant women who are at increased risk. A recommendation
The USPSTF recommends screening for chlamydial infection for all pregnant women aged 24 and younger, and for older pregnant women who are at increased risk. B recommendation
The USPSTF recommends against routinely providing screening for chlamydial infection for women aged 25 and older, whether or not they are pregnant, if they are not at increased risk. C recommendation
The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for chlamydial infection for men. I statement.

CDC recommends screening all sexually active women aged 25 years and younger and older women with risk factors (e.g., those who have a new sex partner or multiple sex partners).

All pregnant women should be routinely tested at the first prenatal visit. Pregnant women aged 25 years and younger and those at increased risk should be re-tested during the third trimester to prevent maternal postnatal complications and chlamydial infection in the infant.


1c.18 **National Guideline Clearinghouse or other URL:** http://www.guideline.gov/content.aspx?id=10408#Section424

1c.19 **Grading of Strength of Guideline Recommendation.** Has the recommendation been graded?  **No**

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

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

1c.22 If other, identify and describe the grading scale with definitions:

1c.23 **Grade Assigned to the Recommendation:**

1c.24 **Rationale for Using this Guideline Over Others:** This measure aligns with the USPSTF guidelines, which is the gold standard for evidence reviews on preventive services. In addition, NCQA 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**

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?  
No [ ] Yes [ ]

#### S.2 If yes, provide web page URL:

<table>
<thead>
<tr>
<th>2a. RELIABILITY. Precise Specifications and Reliability Testing:</th>
<th>H [ ] M [ ] L [ ] I [ ]</th>
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</thead>
</table>

#### 2a. Precise Measure Specifications. *(The measure specifications precise and unambiguous.)*

**2a.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):*

At least one chlamydia test during the measurement year as documented through administrative data.

**2a.1.2 Numerator Time Window** *(The time period in which the target process, condition, event, or outcome is eligible for inclusion):*

December 31 of the measurement year.

**2a.1.3 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:*

At least one chlamydia test during the measurement year.

**Administrative Specification:**  
One or more of the following codes to identify Chlamydia Screening  
CPT: 87110, 87270, 87320, 87490-87492 87810  
LOINC: 557-9, 560-3, 4993-2, 6349-5, 6354-5, 6355-2, 6356-0, 6357-8, 14463-4, 14464-2, 14467-5, 14470-9, 14471-7, 14474-1, 14509-4, 14510-2, 14513-6, 16600-9, 16601-7, 21189-6, 21190-4, 21191-2, 21192-0, 21613-5, 23838-6, 31771-9, 31772-7, 31775-0, 31777-6, 36902-5, 36903-3, 42931-6, 43304-5, 43404-3, 43406-8, 44806-8, 44807-6, 45072-3, 45067-6, 45068-4, 45069-2, 45070-0, 45074-2, 45076-7, 45078-3, 45080-9, 45084-1, 45091-6, 45095-7, 45098-1, 45100-5, 47211-8, 47212-6, 49096-1, 50387-0, 53925-4, 53926-2

**2a.1.4 Denominator Statement** *(Brief, narrative description of the target population being measured):*

Women 16–24 years.

**2a.1.5 Target Population Category** *(Check all the populations for which the measure is specified and tested if any):*  
Adult/Elderly Care, Children's Health

**2a.1.6 Denominator Time Window** *(The time period in which cases are eligible for inclusion):*

December 31 of the measurement year.
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):

Women 16–24 years as of December 31 of the measurement year who are sexually active.

Continuous enrollment: The measurement year.

Allowable gap: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

Anchor date: December 31 of the measurement year.

Benefit: Medical.

Sexually active. Three methods identify sexually active women: pharmacy data, claim/encounter data and medical records data. The organization must use all methods to identify the eligible population; however, a member only needs to be identified in one method to be eligible for the measure.

As documented in the specifications, there are two methods for identifying sexually active women using administrative data: pharmacy data and claim/encounter data. The organization must use both methods to identify the eligible population; however, a member only needs to be identified in one method to be eligible for the measure.

Pharmacy data. Members who were dispensed prescription contraceptives during the measurement year (the measure provides a list of prescriptions).

Claim/encounter data. Members who had at least one encounter during the measurement year with any code in the table of CPT, HCPCS, ICD-9-CM Diagnosis, ICD-9-CM Procedure or UB Revenue codes provided in the measure.

For Electronic and Hybrid Specifications, use the first two methods to identify the eligible population, although a patient must appear in only one method to be eligible for the measure. For Medical Record Specifications, use the third method.

Table CHL-A: Prescriptions to Identify Contraceptives: desogestrel-ethinyl estradiol; drospirenone-ethinyl estradiol; estradiol-medroxyprogesterone; ethinyl estradiol-ethynodiol; ethinyl estradiol-etonogestrel; ethinyl estradiol-levonorgestrel; ethinyl estradiol-norelgestromin; ethinyl estradiol-norethindrone; mestranol-norethindrone; norethindrone.

Diaphragm: diaphragm.

Spermicide: nonxynol 9.

Table CHL-B: Codes to Identify Sexually Active Women

CPT: 11975-11977, 57022, 57170, 58300, 58301, 58600, 58605, 58611, 58615, 58970, 58974, 58976, 59000, 59001, 59012, 59015, 59020, 59025, 59030, 59050, 59051, 59070, 59072, 59074, 59076, 59100, 59120, 59121, 59130, 59135, 59136, 59140, 59150, 59151, 59160, 59200, 59300, 59320, 59325, 59350, 59400, 59409, 59410, 59412, 59414, 59425, 59426, 59430, 59510, 59514, 59515, 59525, 59610, 59612, 59614, 59618, 59622, 59625, 59628, 59840, 59841, 59850-59852, 59855-59857, 59866, 59870, 59871, 59897, 59898, 76801, 76805, 76811, 76813, 76815-76821, 76941, 76945-76946, 80005, 81025, 82015, 82106, 82143, 82731, 83632, 83661-83664, 84163, 84702-84704, 86592, 86593, 86631-86632, 87110, 87164, 87166, 87270, 87320, 87490-87492, 87590-87592, 87620-87622, 87660, 87808, 87810, 87850, 88141-88143, 88147, 88150, 88152-88155, 88164-88167, 88174-88175, 88235, 88267, 88269.


ICD-9-CM Diagnosis: 042, 054.10, 054.11, 054.12, 054.13, 054.19, 079.4, 079.51-079.53, 079.88, 079.98, 091-097, 098.0, 098.10, 098.11, 098.15-098.19, 098.2, 098.30, 098.31, 098.35-098.8, 099, 131, 339.82, 614, 615, 622.3, 623.4, 626.7, 628, 630-679, 795.0, 795.1, 796.7, 996.32, V01.6, V02.7, V02.8, V08, V15.7, V22-V28, V45.5, V61.5-V61.7, V69.2, V72.3, V72.4, V73.81, V73.88, V73.98, V74.5, V76.2.

ICD-9-CM Procedure: 69.01, 69.02, 69.03, 69.7, 72-75, 88.88, 97.24, 97.71, 97.73.

UB Revenue: 0112, 0122, 0132, 0142, 0152, 0720-0722, 0724, 0729, 0923, 0925.

Table CHL-B: Codes to Identify Sexually Active Women (continued)

LOINC: 557-9, 560-3, 688-2, 689-8, 691-6, 692-4, 693-2, 698-1, 1832-5, 1834-1, 2116-3, 2107-1, 2110-5, 2111-3, 2112-1, 2113-9, 2114-7, 2115-4, 2118-8, 2119-6, 4993-2, 5028-6, 5291-0, 5292-8, 5392-6, 5393-4, 5394-2, 6349-5, 6354-5, 6355-2, 6356-0, 6357-8, 6487-3, 6488-1, 6489-9, 6510-2, 6511-0, 6514-4, 6516-9, 6561-5, 6562-3, 7975-6, 8041-6, 10524-7, 10705-2, 11083-3, 11084-1, 11481-9, 11597-2, 12222-6, 12223-4, 14463-4, 14464-2, 14467-5, 14470-9, 14471-7, 14474-1, 14499-1, 14499-5, 14499-7, 14500-2.
Medical record data

Documentation of contraceptive use (prescription or other), any diagnosis or procedure listed below (and in Table CHL-B) or any relevant documentation of marital or intimate partner status in the medical record.

- Pregnancy test
- Alpha-fetoprotein (AFP) test
- Fibrinonectin test
- Syphilis test
- Chlamydia trachomatis test
- Chlamydia species test
- Neiserria gonorrhoeae test
- Chlamydia trachomatis and neiserria gonorrhoeae test
- Human papillomavirus (HPV) test
- Pap test
- Amniotic fluid cytogenetics test
- Obstetric panel

2a1.8 Denominator Exclusions (Brief narrative description of exclusions from the target population):

Members who had a pregnancy test during the measurement year, followed within seven days (inclusive) by either a prescription for isotretinoin (Accutane) or an x-ray. This exclusion does not apply to members who qualify for the denominator based on services other than the pregnancy test alone. Refer to Table CHL-D and Table CHL-E to identify exclusions.

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):

- Codes to Identify Exclusions
  - Pregnancy test - CPT: 81025, 84702, 84703; UB Revenue: 0925; LOINC: 2106-3, 2107-1, 2108-9, 2110-5, 2111-3, 2112-1, 2113-9, 2114-7, 2115-4, 2116-2, 2117-0, 2118-8, 2119-6, with Diagnostic radiology – CPT: 70010-76499; UB Revenue: 032x
  - Table CHL-E: Medications to Identify Exclusions
    - Description: Retinoid
      - Prescription: isotretinoin

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):

- Two age stratifications and a total rate are reported.
  - 16–20 years
  - 21–24 years
  - Total (sum of the two age stratifications)

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:
2a.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;)*

2a.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:

2a.17-18. **Type of Score:** Rate/proportion

2a.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

2a.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.):

Step 1. Determine the eligible population. The eligible population is all members who satisfy all specified criteria, including any age, continuous enrollment, benefit, event, or anchor date enrollment requirement.

Step 2. Search administrative systems to identify numerator events for all members in the eligible population.

Step 3. If applicable, for members for whom administrative data do not show a positive numerator event, search administrative data for an exclusion to the service/procedure being measured.

Note: This step applies only to measures for which optional exclusions are specified and for which the organization has chosen to search for exclusions. The organization is not required to search for optional exclusions.

Step 4. Exclude from the eligible population members from step 3 for whom administrative system data identified an exclusion to the service/procedure being measured.

Step 5. Calculate the rate.

2a.21-23 **Calculation Algorithm/Measure Logic Diagram URL or attachment:**

2a.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):

2a.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 Health Record, Electronic Clinical Data: Pharmacy

2a.26 **Data Source/Data Collection Instrument** *(Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.): Healthcare Effectiveness Data Information Set (HEDIS)

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

2a.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, Health Plan

### 2a1.34-35 Care Setting

*(Check all the settings for which the measure is specified and tested):* Ambulatory Care: Clinician Office

### 2a. 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):*

HEDIS Health plan performance data from 2010

#### 2a2.2 Analytic Method

*(Describe method of reliability testing & rationale):*

Reliability was estimated by using the beta-binomial model. Beta-binomial is a better fit when estimating the reliability of simple pass/fail rate measures as is the case with most HEDIS® health plan measures. The beta-binomial model assumes the plan score is a binomial random variable conditional on the plan’s true value that comes from the beta distribution. The beta distribution is usually defined by two parameters, alpha and beta. Alpha and beta can be thought of as intermediate calculations to get to the needed variance estimates. The beta distribution can be symmetric, skewed or even U-shaped.

Reliability used here is the ratio of signal to noise. The signal in this case is the proportion of the variability in measured performance that can be explained by real differences in performance. A reliability of zero implies that all the variability in a measure is attributable to measurement error. A reliability of one implies that all the variability is attributable to real differences in performance. The higher the reliability score, the greater is the confidence with which one can distinguish the performance of one plan from another. A reliability score greater than or equal to 0.7 is considered very good.

#### 2a2.3 Testing Results

*(Reliability statistics, assessment of adequacy in the context of norms for the test conducted):*

Reliability statistic for Chlamydia screening is 0.99.

### 2b. VALIDITY

**Validity Testing**, including all Threats to Validity: H□ M□ L□ I□

#### 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 measure is aligned with current guidelines

#### 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):*

Field test data

#### 2b2.2 Analytic Method

*(Describe method of validity testing & rationale; if face validity, describe systematic assessment):*

NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement of women and child health care. This panel included representatives from key stakeholder groups, including experts on women’s health, family physicians, health plans, AHRQ and other researchers in the field. (See list of members of Women & Child Measurement Advisory Panel (WCMAP)). Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area.

#### 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):*

This measure was deemed valid by the expert panel.

**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): 

2b3.2 **Analytic Method** *(Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference):*

2b3.3 **Results** *(Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):

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):*

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):*

2b4.4 **If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment:** *Risk adjustment is not applied for this measure at the health plan level. NCQA has determined that risk adjustment is not necessary other than the reporting of the measure is stratified by insurance coverage (commercial and Medicaid). The measure is stratified by age and product line.*

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):*

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

Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

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):*

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):*

During field testing, NCQA compares performance rates based on administrative data with performance rates based on medical record review.

2b6.2 **Analytic Method** *(Describe methods and rationale for testing comparability of scores produced by the different data sources)
Comparison of means with expert review to medical record review, which is considered the gold standard.

2b.6.3 Testing Results (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted):
From 2006 to 2008, the rates for women ages 16-20 varied for each reporting percentile, either remaining stable or increasing slightly, with a peak in 2007. For the 10th percentile, the rate remained relatively stable, going from 24.51% to 26.03% to 24.37%. For the 25th percentile, the rate increased slightly, going from 28.97% to to 30.94% to 29.04%. For the 50th percentile, the rate also increased slightly, going from 33.84% to to 35.97% to 34.50%. For the 75th percentile, the rate remained relatively stable, going from 39.27% to to 35.97% to 39.55%. For the 90th percentile, the rate increased, going from 43.71% to to 46.51% to 45.84%.

From 2006 to 2008, the rates for women ages 21-25 increased slightly or significantly with a peak in 2007. For the 10th percentile, the rate increased slightly, going from 23.57% to to 25.52% to 25.32%. For the 25th percentile, the rate increased slightly, going from 28.77% to to 30.97% to 29.84%. For the 50th percentile, the rate also increased, going from 34.02% to to 37.28% to 36.50%. For the 75th percentile, the rate increased significantly, going from 39.55% to to 44.58% to 44.02%. For the 90th percentile, the rate also increased significantly, going from 47.45% to 50.45% to 51.03%.

2c. Disparities in Care:  (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 to detect disparities.

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain: 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, at all levels (claims data, paper chart review, and electronic records), is not coded in a standard manner, and is incompletely captured. There are no consistent standards for what entity (physician, group, plan, 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 with inability to use the data because of its inconsistency. At the present time, we agree with the IOM report that disparities are best considered by the use of zip code analysis which has limited applicability in most reporting situations. At the health plan level, for HEDIS health plan data collection, NCQA does have extensive data related to our use of stratification by insurance status (Medicare, Medicaid and private-commercial) and would strongly recommend this process where the data base supporting the measurement includes this information. However, we believe that the measure specifications should NOT require this since the measure is still useful where the data needed to determine disparities cannot be ascertained from the data available.

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 Purpose/ Use (Check all purposes and/or uses for which the measure is intended): Public Reporting, Quality Improvement (Internal to the specific organization), Regulatory and Accreditation Programs
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 with Benchmarking (external benchmarking to multiple organizations)

| 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 is used in public reporting for plans only through Healthcare Effectiveness Data and Information Set (HEDIS) and is reported through venues such as the annual State of Healthcare Quality report, Quality Compass, America’s Best Health Plans.

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: HEDIS measures adhere to the desirable attributes of scientific acceptability, feasibility and usability. The measures provide performance rates that are audited for consistency and accuracy.

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): The measure is part of federal reporting initiatives including CHIPRA Core Set, Meaningful Use

| 3b. Usefulness for Quality Improvement: | H | M | L | I |
| (The measure is meaningful, understandable and useful for quality improvement.) |

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].

This measure is a measure in the HEDIS measure set and is used in NCQA’s Health Plan Accreditation program. It is also reported through venues including Quality Compass, the State of Health Care Quality Report, and America’s Best Health Plans.

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: HEDIS measures adhere to the desirable attributes of scientific acceptability, feasibility and usability. The measures provide performance rates that are audited for consistency and accuracy.

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:
Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)

| 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:  

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:
This measure has detailed, precise specifications that clearly define the numerator, denominator, data sources, allowable values, methods of measurement and method of reporting. In addition, all measures that are used in NCQA programs are audited.

4d. Data Collection Strategy/Implementation:  

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):

Overall, to what extent was the criterion, Feasibility, met?  
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:
0409 : STD - Chlamydia and Gonorrhea Screenings

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? Yes

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):

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): National Committee for Quality Assurance, 1100 13th Street NW, Suite

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
### NQF #0033 Chlamydia screening in women

**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, Suite 1000, Washington, District Of Columbia, 20005

**Co.4 Point of Contact:** Bob, Rehm, Assistant Vice President, Performance Measurement, Rehm@ncqa.org, 202-955-1728-

**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:**

**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.

*Child Health Measurement Advisory Panel:*
- Jeanne Alicandro
- Barbara Dailey
- Denise Dougherty, PhD
- Ted Ganiats, MD
- Foster Gesten, MD
- Nikki Highsmith, MPA
- Charlie Homer, MD, MPH
- Jeff Kamil, MD
- Elizabeth Siteman
- Mary McIntyre, MD, MPH
- Virginia Moyer, MD, MPH, FAAP
- Lee Partridge
- Xavier Sevilla, MD, FAAP
- Michael Siegal
- Janet Sullivan

The NCQA MAP advised NCQA during measure development. They evaluated the way staff specified measures, assessed the content validity of measures, and reviewed field test results. As you can see from the list, the MAP consisted of a balanced group of experts. Note that, in addition to the MAP, we also vetted these measures with a host of other stakeholders, as is our process. Thus, our measures are the result of consensus from a broad and diverse group of stakeholders, in addition to the MAP.

**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:

**Measure Developer/Steward Updates and Ongoing Maintenance**

**Ad.3** Year the measure was first released: 2004

**Ad.4** Month and Year of most recent revision: 2009

**Ad.5** What is your frequency for review/update of this measure? Measures are reevaluated approximately every 3 years. In addition, measures are reviewed every year

**Ad.6** When is the next scheduled review/update for this measure?

**Ad.7** Copyright statement: © June 29, 2011 by the National Committee for Quality Assurance

1100 13th Street, NW, Suite 1000
### Washington, DC 20005

**Ad.8 Disclaimers:**

**Ad.9 Additional Information/Comments:**

**Date of Submission (MM/DD/YY):** 07/12/2011