NQF # 0579 Annual cervical cancer screening or follow-up in high-risk 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.

<table>
<thead>
<tr>
<th>NQF #: 0579</th>
<th>NQF Project: Population Health: Prevention Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(for Endorsement Maintenance Review)</td>
</tr>
<tr>
<td>Original Endorsement Date: Dec 04, 2009</td>
<td>Most Recent Endorsement Date: Dec 04, 2009</td>
</tr>
</tbody>
</table>

### BRIEF MEASURE INFORMATION

**De.1 Measure Title:** Annual cervical cancer screening or follow-up in high-risk women

**Co.1.1 Measure Steward:** Resolution Health, Inc.

**De.2 Brief Description of Measure:** This measure identifies women age 12 to 65 diagnosed with cervical dysplasia (CIN 2), cervical carcinoma-in-situ, or HIV/AIDS prior to the measurement year, and who still have a cervix, who had a cervical CA screen during the measurement year.

**2a1.1 Numerator Statement:** Patients in the denominator who had a cervical CA screen during the measurement year.

**2a1.4 Denominator Statement:** Women who are 12-65 years of age who have a diagnosis of cervical dysplasia (CIN 2), cervical carcinoma-in-situ, or HIV/AIDS diagnosed prior to the measurement year, and who still have a cervix (excludes women with a hysterectomy and no residual cervix).

**2a1.8 Denominator Exclusions:** No claims for cervical cancer screening exclusions, based on NCQA/HEDIS technical specifications: Women who had a hysterectomy with no residual cervix.

**1.1 Measure Type:** Process

**2a1.25-26 Data Source:** Administrative claims, Electronic Clinical Data: Pharmacy

**2a1.33 Level of Analysis:** Clinician: Group/Practice, Clinician: Individual, Health Plan, Integrated Delivery System, Population: Community, Population: County or City

**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):** N/A

### 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)

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

De.4 Subject/Topic Areas (Check all the areas that apply):  Cancer, Cancer : Gynecologic, GU/GYN : Gynecology, Infectious Diseases, Infectious Diseases : Sexually Transmitted, Prevention, Prevention : Screening

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

1a. Demonstrated High Impact Aspect of Healthcare:  Affects large numbers

1a.2 If “Other,” please describe:

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


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:
Use of this measure should increase screening for and decrease incidence of cervical cancer in high risk women.

1b.2 Summary of Data Demonstrating Performance Gap (Variation or overall less than optimal performance across providers):

<table>
<thead>
<tr>
<th>For Maintenance</th>
<th>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</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHI testing experience</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>numerator denominator proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2835 3611 78.5%</td>
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</tbody>
</table>

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 – Descriptive statistics for performance results for this measure by population group]
N/A

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>H-M</td>
<td>M-H</td>
<td>M-H</td>
<td>Yes</td>
</tr>
</tbody>
</table>

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
### NQF #0579 Annual cervical cancer screening or follow-up in high-risk women

**L** | **M-H** | **M** | **Yes** | IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise **No**
---|---|---|---|---
**M-H** | **L** | **M-H** | **Yes** | IF potential benefits to patients clearly outweigh potential harms: otherwise **No**
**L-M-H** | **L-M-H** | **L** | **No** | 

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

**Does the measure pass subcriterion 1c?**

**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):*
| Process: cervical screening (Pap smear)
| Health outcome: cervical cancer

| **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):*
| Central topic: Cervical cancer in high risk individuals
| Outcomes addressed: Cervical cancer
| Population: High risk individuals (women 12-65yo with diagnosis of cervical dysplasia (CIN 2), cervical carcinoma in-situ (CIN 3), HIV/AIDS, DES exposure in Utero, or Transplant)

| **1c.5 Quantity of Studies in the Body of Evidence** *(Total number of studies, not articles):*

| **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):*

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

| **1c.8 Net Benefit** *(Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms):*
| By identifying specific patients in whom care is not consistent with the clinical practice guideline underlying the measure, the measure will facilitate improvement in the care for those patients by highlighting the patient-specific QI opportunity for the patient’s physician(s). In addition, the feedback physicians will receive on their overall performance on this measure will help focus their attention on the underlying care issue and improve their performance on that issue across all of their patients. If performance measurement is combined with some sort of financial incentive, such as in a pay for performance program, the QI impact may be increased.

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

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: American College of Obstetricians and Gynecologists (ACOG)

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: B

1c.14 Summary of Controversy/Contradictory Evidence: The USPSTF recommendations for cervical cancer screening do not support increased frequency of cervical cancer screening for women, including those with high-risk factors, noting, “The USPSTF found no direct evidence that annual screening achieves better outcomes than screening every 3 years. Modeling studies suggest little added benefit of more frequent screening for most women... the American College of Obstetricians and Gynecologists (ACOG) identifies additional risk factors that might justify annual screening, including a history of cervical neoplasia, infection with HPV or other sexually transmitted diseases (STDs), or high-risk sexual behavior, but data are limited to determine the benefits of these strategies.”

In contrast, the ACOG’s guidelines state, “Certain risk factors have been associated with CIN in observational studies... Women infected with HIV should have cervical cytology screening twice in the first year after diagnosis and annually thereafter. Women treated in the past for CIN2 or CIN3 or cancer remain at risk for persistent or recurrent disease and should continue to be screened annually.”

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


1c.16 Quote verbatim, the specific guideline recommendation (Including guideline # and/or page #):
"Women infected with HIV should have cervical cytology screening twice in the first year after diagnosis and annually thereafter (53). Women treated in the past for CIN2, CIN3, or cancer remain at risk for persistent or recurrent disease for at least 20 years after treatment and after initial posttreatment surveillance and should continue to have annual screening for at least 20 years (54–58)."


1c.18 National Guideline Clearinghouse or other URL: N/A

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: American College of Obstetricians and Gynecologists

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: B
1c.24 Rationale for Using this Guideline Over Others:

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 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: http://www.resolutionhealth.com/558.html

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 in the denominator who had a cervical CA screen during the measurement year

2a1.2 Numerator Time Window (The time period in which the target process, condition, event, or outcome is eligible for inclusion): 1 year.

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: >=1 procedure claim for a cervical cancer screen during the measurement year.

Codes with descriptors:
0923 Other Diagnostic Services  HSREV
88141 CYTOPATH C/V INTERPRET CPT4
88142 CYTOPATH C/V THIN LAYER CPT4
88143 CYTOPATH CERV/VAG, W/MNL SCR-RESCR CPT4
88147 CYTOPATH C/V AUTOMATED CPT4
88148 CYTOPATH C/V AUTO RESCREEN CPT4
88150 CYTOPATH C/V MANUAL CPT4
88152 CYTOPATH C/V AUTO REDO CPT4
88153 CYTOPATH C/V REDO CPT4
88154 CYTOPATH C/V SELECT CPT4
88155 CYTOPATH C/V INDEX ADD-ON CPT4
88164 CYTOPATH TBS C/V MANUAL CPT4
88165 CYTOPATH TBS C/V REDO CPT4
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2a1.4 Denominator Statement (Brief, narrative description of the target population being measured):
Women who are 12-65 years of age who have a diagnosis of cervical dysplasia (CIN 2), cervical carcinoma-in-situ, or HIV/AIDS diagnosed prior to the measurement year, and who still have a cervix (excludes women with a hysterectomy and no residual cervix).

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

2a1.6 Denominator Time Window (The time period in which cases are eligible for inclusion):
2 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):
- Age >12 and <65 years old as of the end of the measurement year
- AND female
- AND at least 1 claim prior to the measurement year for 1 or more of the following diagnoses:
  - cervical dysplasia (CIN 2), or
  - cervical carcinoma in-situ (CIN 3), or
  - HIV/AIDS, or
  - DES exposure in Utero, or
  - Transplant, or
  - Transplant Status
- And eligible for service benefits for 2 years preceding the end of the measurement year

Codes with descriptors:
"CERVICAL CIS"
2331 CARCINOMA IN SITU OF CERVIX UTERI ICD9

"CERVICAL DYSPLASIA"
62210 DYSPLASIA OF CERVIX UNSPECIFIED ICD9
62211 MILD DYSPLASIA OF CERVIX ICD9
62212 MODERATE DYSPLASIA OF CERVIX ICD9
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"DES EXPOSURE IN UTERO"
76076 NOX INFLU FETUS/NB PLACNTA/BRST DES ICD9

"HIV AIDS"
042 HUMAN IMMUNODEFICIENCY VIRUS [HIV] ICD9
07953 HIV TYPE 2 IN CCE & UNS SITE ICD9
008 ASYMPTOMATIC HIV INFECTION STATUS ICD9

"TRANSPLANT"
00580 ANESTH HEART/LUNG TRANSPLNT CPT4
00796 ANESTH FOR LIVER TRANSPLANT CPT4
00868 ANESTH KIDNEY TRANSPLANT CPT4
32851 LUNG TRANSPLANT SINGLE CPT4
32852 LUNG TRANSPLANT WITH BYPASS CPT4
32853 LUNG TRANSPLANT DOUBLE CPT4
32854 LUNG TRANSPLANT WITH BYPASS CPT4
335 LUNG TRANSPLANT ICD9P
3350 LUNG TRANSPLANTATION NOS ICD9P
3351 UNILATERAL LUNG TRANSPLANTATION ICD9P
3352 BILATERAL LUNG TRANSPLANTATION ICD9P
336 COMBINED HEART-LUNG TRANSPLANTATION ICD9P
33935 TRANSPLANTATION HEART/LUNG CPT4
33945 TRANSPLANTATION OF HEART CPT4
3751 HEART TRANSPLANTATION ICD9P
38240 BONE MARROW/STEM TRANSPLANT CPT4
38241 BONE MARROW/STEM CELL TRANSPL; AUTO CPT4
38242 BN MARROW/BLD STEM CELL TPLNT; ALLO CPT4
410 BONE MARROW TRANSPLANT ICD9P
4100 BONE MARROW TRANSPLANT NOS ICD9P
4101 AUTOL BN MARROW TPLNT W/O PURGING ICD9P
4102 ALLOGENEIC MARROW TRANSPL-PURGE ICD9P
4103 ALLOGENEIC BONE MARROW TRANSPL ICD9P
4104 AUTO HEMAT ST CELL TRNSPLT W/O PURG ICD9P
4105 ALLO HEMAT ST CELL TRNSPLT W/O PURG ICD9P
4106 CORD BLOOD STEM CELL TRANSPLANT ICD9P
4107 AUTO HEMAT ST CELL TRNSPLT W/PURG ICD9P
4108 ALLO HEMAT STEM CELL TRNSPLT W/PURG ICD9P
4109 AUTOL BN MARROW TPLNT W/PURGING ICD9P
47135 LIVER ALLOTRANSPL; ORTHOTOP-PRT/ALL CPT4
47136 LIVER ALLOTRANSPL; HETEROTOPIC CPT4
47140 PARTIAL REMOVAL DONOR LIVER CPT4
48160 PANCREATECT W/TPLNT PANC/ISLET CELL CPT4
48554 TRANSPLANTATION PANCREATIC ALLOGFT CPT4
50360 RENAL ALLOTRANSPL; W/O DONR NEPHRECT CPT4
50365 RENAL ALLOTRANSPL; W/RECIP NEPHRECT CPT4
505 LIVER TRANSPLANT ICD9P
5051 AUXILIARY LIVER TRANSPLANT ICD9P
5059 OTHER TRANSPLANT OF LIVER ICD9P
528 TRANSPLANT OF PANCREAS ICD9P
5280 PANCREATIC TRANSPLANT NOS ICD9P
5281 REIMPLANTATION OF PANCREATIC TISSUE ICD9P
5282 HOMOTRANSPLANT OF PANCREAS ICD9P
5283 HETEROTRANSPLANT OF PANCREAS ICD9P
Denominator Exclusions (Brief narrative description of exclusions from the target population):
No claims for cervical cancer screening exclusions, based on NCQA/HEDIS technical specifications: Women who had a hysterectomy with no residual cervix.

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):
"HYSTERECTOMY_HEDIS_D"

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):
The measure specifications do not require the results to be stratified.

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

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

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.)*: Please note previous answers. |
| 2a1.21-23 **Calculation Algorithm/Measure Logic Diagram URL or attachment**: URL http://www.resolutionhealth.com/558.html |
| 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): Minimum sample size: 10 |
| We have developed a hierarchical logistic regression model with expert biostatisticians at the Johns Hopkins School of Public Health that enables one to produce a probability distribution around a point estimate of the "quality score" for a given physician. This model has shown that there is no minimum sample size that is required to produce a quality score which has a comparatively tight" probability distribution. Rather, the number of required observations depends on how a given physician performs on particular measures compared to how all other MDs perform on those measures. We recommend that a minimum of 10 observations be required, however, because of the normality assumptions that underlies the model and for public "face validity". Alternatively, to satisfy current NCQA standards, a minimum of 30 observations could be required. |
| 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 : 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.)*: Collection Instrument - administrative claims. |
| 2a1.27-29 **Data Source/data Collection Instrument Reference Web Page URL or Attachment**: URL http://www.resolutionhealth.com/558.html |
| 2a1.30-32 **Data Dictionary/Code Table Web Page URL or Attachment**: Attachment 0579- 2a1.30. Data Dictionary or Code Table.pdf |
| 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, Integrated Delivery System, Population : Community, Population : County or City |
| 2a1.34-35 **Care Setting** *(Check all the settings for which the measure is specified and tested)*: Ambulatory Care : Clinic/Urgent Care, Ambulatory Care : Clinician Office |
| 2a2. **Reliability Testing**. *(Reliability testing was conducted with appropriate method, scope, and adequate demonstration of)*

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

9
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): We have tested this measure on several patient populations, including, in total, more than 30 million people enrolled in 18 different health plans. In addition, we have used analogous computer algorithms to identify patient-specific QI opportunities in more than 5 million health plan members and have sent messages regarding those opportunities to either the member or the member’s physician or both.

2a2.2 Analytic Method (Describe method of reliability testing & rationale): The validity of a physician quality score describes how accurately it estimates the true value. Reliability is the stability or consistency of an estimator from one data set to the next. Both are important in assessing the performance of the quality score. We have used the following measure as an indication of the reliability of each of our measures: 1 minus [(the variance of the posterior distribution of the physician quality score) divided by (the variance of the true physician quality score)], which is the reduction in the variance of a doctor’s performance score (posterior distribution) obtained by using his or her performance data, expressed as a fraction of the total variance before any data is collected.

2a2.3 Testing Results (Reliability statistics, assessment of adequacy in the context of norms for the test conducted): The reliability of a physician quality score depends on the number of observations available for a given physician, how the physician performs relative to all other physicians, and the overall variance in physician quality scores. As a result, reliability varies with the population of MDs in whom the measure is used. In our experience, reliability is in the range of 0.5 to >0.7.

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: Evidence Cited in Support of the Measure Focus: Women infected with HIV should have cervical cytology screening twice in the first year after diagnosis and annually thereafter (53). Women treated in the past for CIN 2, CIN 3, or cancer remain at risk for persistent or recurrent disease for at least 20 years after treatment and after initial posttreatment surveillance and should continue to have annual screening for at least 20 years (54–58).


Measure Specifications:
- measure focus: cervical CA screening
- target population: women 12 to age 65 yrs diagnosed with cervical dysplasia (CIN 2), cervical carcinoma-in-situ, or HIV/AIDS
- exclusions: women who had a hysterectomy with no residual cervix

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): We have tested this measure on several patient populations, including, in total, more than 30 million people enrolled in 18 different health plans. In addition, we have used analogous computer algorithms to identify patient-specific QI opportunities in more than 5 million health plan members and have sent messages regarding those opportunities to either the member or the member’s physician or both.

2b2.2 Analytic Method (Describe method of validity testing and rationale; if face validity, describe systematic assessment): We have employed several approaches to ensure the validity of this measure: 1) we’ve ensured that the technical specifications for this measure are valid reflections of the underlying clinical practice guideline; 2) we have obtained feedback on the validity of the measure from several physician panels that were assembled by either Care Focused Purchasing or the Massachusetts Group Insurance
Commission Clinical Performance Improvement Initiative, or both, and 3) we have systematically collected feedback from physicians and health plan members to whom we have sent messages regarding this measure.

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 is considered to be valid by the physician panels that have reviewed it. (More information regarding the panels is provided elsewhere in this document.) In addition, the measure has been considered to be valid by the medical directors of 17 different health plans. In addition, the fact that thousands of physicians have received results based on this measure without indicating that they don’t believe the measure is valid attests to its validity.

**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:*
There is no need to risk adjust results from this measure. To the extent that the measure applies only to patients in a particular risk category, that has been taken into account in the specifications for the denominator or exclusions for this measure.

### 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):*

RHI testing experience.

#### 2b5.2 Analytic Method *(Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance):*
We have developed a hierarchical logistic regression model with expert biostatisticians at the Johns Hopkins School of Public Health that enables one to produce a probability distribution around a point estimate of the "quality score" for a given physician. This model has shown that there is no minimum sample size that is required to produce a quality score which has a comparatively "tight" probability distribution. Rather, the number of required observations depends on how a given physician performs on particular measures compared to how all other MDs perform on those measures. We recommend that a minimum of 10 observations be required, however, because of the normality assumption that underlies the model and for public "face validity". Alternatively, to satisfy current NCQA standards, a minimum of 30 observations could be required. We have employed this statistical approach in the MD quality profiling we performed on the experience of more than 2 million members of 6 health plans participating in the Massachusetts Group Insurance Commission Clinical Performance Improvement Initiative in 2008.

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):

<table>
<thead>
<tr>
<th>numerator</th>
<th>denominator</th>
<th>proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2835</td>
<td>3611</td>
<td>78.5%</td>
</tr>
</tbody>
</table>

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):
N/A

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

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): N/A

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:
URL
http://www.resolutionhealth.com/558.html

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 the purposes and/or uses for which the measure is intended): Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple plans participating in the Massachusetts Group Insurance Commission Clinical Performance Improvement Initiative in 2008.}

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

(Check all that apply; for any that are checked, provide the specific program information in the following questions): Current Use:
- Public Reporting
- Quality Improvement with Benchmarking (external benchmarking to multiple organizations)
- Quality Improvement (Internal to the specific organization)

#### 3a. Usefulness for Public Reporting

<table>
<thead>
<tr>
<th>Rating</th>
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<tbody>
<tr>
<td>H</td>
</tr>
<tr>
<td>M</td>
</tr>
<tr>
<td>L</td>
</tr>
<tr>
<td>I</td>
</tr>
</tbody>
</table>

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

**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.**

Group Insurance Commission of Massachusetts, Clinical Performance Improvement Initiative:
- Main Phone: (617) 727-2310
- Mailing Address: P.O. Box 8747, Boston, MA 02114-8747
- Website: www.mass.gov/gic/annualreportb.htm

**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:

**Data/Sample:** We have tested this measure on several patient populations, including, in total, more than 30 million people enrolled in 18 different health plans.

**Methods:** The results have been provided to the medical directors of the 18 health plans, all of whom have indicated that they understand the particular aspect of care that the measure addresses and how to interpret the result for a physician. In addition, results have been presented to HR directors from >60 national employers.

**Results:** Both the health plan medical directors and the HR personnel from the employers have indicated that they understand the particular aspect of care that the measure addresses and how to interpret the result for a physician. We do not have data on the extent to which individual physicians understand the measure result, but we presume that, since health plan medical directors and non-medical personnel from employers understand the result, that physicians and lay people will also so long that adequate explanation is provided.

#### 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):)

**3b. Usefulness for Quality Improvement**

<table>
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<tr>
<th>Rating</th>
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<tbody>
<tr>
<td>H</td>
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<td>M</td>
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<tr>
<td>L</td>
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<tr>
<td>I</td>
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</tbody>
</table>

(The measure is meaningful, understandable and useful for quality improvement.)

**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.**

N/A

**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:

N/A

**Overall, to what extent was the criterion, Usability, met?**

<table>
<thead>
<tr>
<th>Rating</th>
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<tbody>
<tr>
<td>H</td>
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<tr>
<td>M</td>
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<tr>
<td>L</td>
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<tr>
<td>I</td>
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</tbody>
</table>

Provide rationale based on specific subcriteria:

### 4. FEASIBILITY

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. **(evaluation criteria)**

<table>
<thead>
<tr>
<th>4a. Data Generated as a Byproduct of Care Processes:</th>
<th>H</th>
<th>M</th>
<th>L</th>
<th>I</th>
</tr>
</thead>
</table>

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)

<table>
<thead>
<tr>
<th>4b. Electronic Sources:</th>
<th>H</th>
<th>M</th>
<th>L</th>
<th>I</th>
</tr>
</thead>
</table>

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 in electronic claims

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:

<table>
<thead>
<tr>
<th>4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences:</th>
<th>H</th>
<th>M</th>
<th>L</th>
<th>I</th>
</tr>
</thead>
</table>

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:

As with any type of clinical performance measure, and with any source of data used to operationalize the measure, there will be some instances in which the data used to compute the measure are incomplete or inaccurate. We try to minimize the impact of such errors or omissions through the way we have constructed the technical specifications for the measure. There is no data source for performance measurement that is completely accurate. Two studies have shown that physician performance tends to be better when assessed using claims data compared to via chart abstraction.

Potential data errors of omission or commission could be audited through chart abstraction, or feedback from physicians and patients. However, as mentioned above, each of these alternative sources of information also are susceptible to error and thus are not true gold standards.

Potential problems during testing were audited through feedback from physicians whose performance has been evaluated.

<table>
<thead>
<tr>
<th>4d. Data Collection Strategy/Implementation:</th>
<th>H</th>
<th>M</th>
<th>L</th>
<th>I</th>
</tr>
</thead>
</table>

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):** N/A

Overall, to what extent was the criterion, Feasibility, met? **(Provide rationale based on specific subcriteria):**

<table>
<thead>
<tr>
<th>OVERALL SUITABILITY FOR ENDORSEMENT</th>
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</thead>
<tbody>
<tr>
<td>Does the measure meet all the NQF criteria for endorsement?</td>
</tr>
</tbody>
</table>

Rationale:

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

<table>
<thead>
<tr>
<th>5. COMPARISON TO RELATED AND COMPETING MEASURES</th>
</tr>
</thead>
</table>

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.
NQF #0579 Annual cervical cancer screening or follow-up in high-risk women

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):

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): Resolution Health, Inc., 10490 Little Patuxent Parkway, Suite 610, Columbia, Maryland, 21044

Co.2 Point of Contact: Allen, Leavens, MD, MPH, allen.leavens@anthem.com, 240-295-6205-

Co.3 Measure Developer if different from Measure Steward: Resolution Health, Inc., 10490 Little Patuxent Parkway, Suite 610, Columbia, Maryland, 21044

Co.4 Point of Contact: Allen, Leavens, MD, MPH, allen.leavens@anthem.com, 240-295-6205-

Co.5 Submitter: Kevin, Bowman, MD, MBA, MPH, kevin.bowman@wellpoint.com, 240-295-1398-., Resolution Health, Inc.

Co.6 Additional organizations that sponsored/participated in measure development:

Co.7 Public Contact: Allen, Leavens, MD, MPH, allen.leavens@anthem.com, 240-295-6205-., Resolution Health, Inc.

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.

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: 10, 2008

Ad.5 What is your frequency for review/update of this measure? Annual Review

Ad.6 When is the next scheduled review/update for this measure? 06, 2012

Ad.7 Copyright statement:

Ad.8 Disclaimers:
<table>
<thead>
<tr>
<th>Ad.9 Additional Information/Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Submission (MM/DD/YY):</td>
</tr>
<tr>
<td></td>
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<tr>
<td>08/19/2011</td>
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